CCI

# A Guide to Intervention Code Assignment

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# About CIHI

The Canadian Institute for Health Information (CIHI) is an independent, not-for-profit organization that provides essential information on Canada's health systems and the health of Canadians.

We provide comparable and actionable data and information that are used to accelerate improvements in health care, health system performance and population health across Canada. Our stakeholders use our broad range of health system databases, measurements and standards, together with our evidence-based reports and analyses, in their decision-making processes. We protect the privacy of Canadians by ensuring the confidentiality and integrity of the health care information we provide.

# Acknowledgements

The Canadian Institute for Health Information (CIHI) wishes to acknowledge and thank the users of the Canadian Classification of Health Interventions (CCI) for their many contributions to the completeness and accuracy of the intervention classification.

# Chapter 1: Introduction

## Guide overview

### Introduction

***CCI: A Guide to Intervention Code Assignment*** brings together the basic requirements (nuts and bolts) for coding with the Canadian Classification of Health Interventions (CCI) along with finer points (ins and outs) on commonly encountered challenges. In addition to this chapter, the guide is broken into the following chapters and sections:

- Chapter 2: Using CCI: The basics
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### What is the purpose of this guide?

This guide consolidates basic facts about CCI that were previously spread over a variety of sources; provides the complete picture of its basic application; and assists in advancing all CCI users beyond the basics.

### Who should use this guide?

This guide is intended for all health information management professionals working with the Discharge Abstract Database (DAD) and/or the National Ambulatory Care Reporting System (NACRS) who are responsible for coding patient records, data quality and/or analyzing clinical health data.

This guide is relevant to new users of CCI and to more advanced users as a refresher.

# Requirements for using this guide

To enhance understanding of the content in this guide, users will need access to the most current version of the Canadian Classification of Interventions (CCI) and the Canadian Coding Standards, as applicable.

## Note

The current version of the coding standards — *Canadian Coding Standards for Version 2022 ICD-10-CA and CCI* — is intended for use with the 2022 version of the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Canada (ICD-10-CA) and CCI. The classifications and coding standards are published every three years on cihi.ca.

# Chapter 2: Using CCI — The basics

## Chapter overview

This chapter provides an overview of the core elements associated with classifying health care interventions using CCI.

A sound understanding of the structure of CCI, its built-in coding instructions and conventions and how to search CCI using Folio Views provides a solid foundation upon which to build coding skill and expertise.

Chapter 2 consists of the following sections:

- Section 2.1: CCI — Its structure and rules
- Section 2.2: Using Folio Views

There is a series of knowledge checks you can complete at the end of each section. You can check your answers in Appendix A.

## Section 2.1: CCI — Its structure and rules

### Introduction

CCI is a multi-axial classification of health-related interventions developed and maintained by the Canadian Institute for Health Information (CIHI) to facilitate the capture of health care interventions. CCI is based on the generic type of action performed, regardless of service provider and service setting, and can be applied to interventions across the health care continuum.

CCI was created as a companion intervention classification to the disease classification ICD-10-CA. Beginning in 1996, CCI was developed by a team at CIHI for implementation with ICD-10-CA in 2001. There was a staggered implementation of ICD-10-CA/CCI across Canada starting in April 2001. By April 2006, all 10 provinces and 3 territories had adopted these classifications for disease and intervention code assignment.

Through the enhancement process, new codes have been added and previous ones deactivated to ensure the classification is clinically current and relevant. As of version 2022, there are 17,417 active codes.

# Structure of CCI

This section provides a brief overview of the makeup of the CCI classification and its codes.

Additional details specific to the proper selection of each component of the CCI codes are contained in Chapter 3: Using CCI — Field by field.

## Alphabetical index and tabular list

The main components of CCI are the alphabetical index and tabular list. The alphabetical index lists lead terms and subterms (modifiers) for types of interventions and provides a jump link to the rubric in the tabular list at which the particular intervention is located.

The tabular list is a numeric–alphabetic arrangement from the broad section level to the specific code level of CCI.

### Important note

Only the tabular list contains a fully complete CCI code. In the alphabetical index, codes are provided at the rubric level only and are listed as a jump link to the tabular list. Additional characters are included only in the tabular list, which are necessary to complete the code. The tabular list must be referenced when assigning a CCI code.

## CCI sections

The tabular list is divided into seven sections based on the broad realm of the interventions contained therein:

- **Section 1** — Physical/Physiological Therapeutic Interventions
- **Section 2** — Diagnostic Interventions
- **Section 3** — Diagnostic Imaging Interventions
- **Section 5** — Obstetrical and Fetal Interventions
- **Section 6** — Cognitive, Psychosocial and Sensory Diagnostic and Therapeutic Interventions
- **Section 7** — Other Healthcare Interventions
- **Section 8** — Therapeutic Interventions Strengthening the Immune System and/or Genetic Composition

## Note

Of historical interest, Section 8 was added in v2003 and Section 4 — Clinical Laboratory Interventions was removed in v2009.

## Groups and blocks

Each section of CCI is subdivided into relevant homogenous groups. For example, the grouping in sections 1, 2 and 3 are by body system (e.g., nervous system) and specific anatomical site (e.g., brain), and in Section 5 the grouping is by stages of pregnancy and fetal development. A range of groups is referred to as a block; a group is a single entity. An example of a block is *Therapeutic Interventions on Brain and Spinal Cord* (1AA to 1AZ); an example of a group within this block is 1.AN.^^.^^*Therapeutic Interventions on the Brain*.

## Rubrics

Within the groups, the arrangement is by type of intervention (**what** was performed). At this point, the rudimentary code is referred to as a rubric. A rubric consists of five characters: rubric **1.AN.09.^^**, for example, contains all interventions related to stimulation of the brain. Field 1 pertains to the section (1: Physical/Physiological Therapeutic Interventions); field 2 pertains to the anatomy site (AN brain); and field 3 pertains to the generic intervention or intent (09 stimulation). The caret symbols (^^) are used following the rubric to indicate that a minimum of two more characters is required to complete the code.

## Qualifiers

To complete the code, valid qualifiers are selected from those listed at the rubric. There are three types of qualifiers that describe **how** the intervention is done. At minimum, qualifier 1 — which describes the approach +/- technique — is required to complete the code. Some interventions also require selection of qualifier 2 — which describes the agent or device — and/or qualifier 3 — which describes the type of tissue employed.

## A complete code

A minimum number of seven characters is required for a complete code in CCI. The maximum number of characters is 10. The characters are broken up into fields by punctuation for presentation purposes. The following example illustrates a code containing nine characters.

**1.AN.09.JA-DV** *Stimulation, brain using external electrical stimulation (for shock or convulsion)*

The following table shows the six code components of a CCI code — one field each for section, group (e.g., anatomy site) and intervention and three fields for qualifiers. The code 1.AN.09.JA-DV is used as an example of how the characters in this code fit into the fields.

| Field 1 | Field 2 | Field 3 | Field 4 | Field 5 | Field 6 |
|---|---|---|---|---|---|
| Section | Anatomy Site | Intervention | Qualifier 1: Approach/ technique | Qualifier 2: Agent or device | Qualifier 3: Tissue |
| **1** | **AN** | **09** | **JA** | **DV** | **Left blank** |
| Physical/ Physiological Therapeutic Interventions | Brain | Stimulation | External approach | Electrical stimulation device | There is no tissue used for this intervention |

### Important note

When a complete code consists of fields 1 to 4 and field 6 (i.e., there is no field 5), field 5 is replaced with "XX"; an example is 1.CC.80.LA-XX-A *Repair, cornea using autograft [e.g. conjunctival flap]*.

## Attributes

CCI also includes attributes, which are separate data elements extraneous to the CCI code that provide extra detail about the **status** (e.g., abandoned), **location** (e.g., right, left) and/or **extent** (e.g., subtotal [versus total] hysterectomy) of the intervention. Some attributes are mandatory at specific rubrics throughout the classification; otherwise they are optional.

## Diagrams

Diagrams in CCI can be referenced to assist with selection of the correct anatomy site. For example, the diagram **Joint–Hip** helps with selecting the alphabetical characters to use for the anatomy site based on the description in the documentation. It is easy to establish from the diagram that the anatomy site described as "proximal femur" is classified to anatomy site group **VC** *Femur*, whereas the anatomy site described as "femoral head" is classified to **VA** *Hip joint*.

### Appendices

The appendices provide more detailed information about certain aspects of the classification. The appendices in CCI are the following:

- **Appendix A** — CCI Code Structure
- **Appendix B** — CCI Rubric Finder
- **Appendix C** — CCI Attributes
- **Appendix D** — Pharmacological, Biological and Other Agents: Table of Conversions for CCI Code Component to ATC Code
- **Appendix E** — New CCI Codes for 2022
- **Appendix F** — Disabled CCI Codes for 2022
- **Appendix G** — New CCI Mandatory Reference Values for 2022
- **Appendix H** — Disabled CCI Mandatory Reference Values for 2022

### Further resources

The contents tab in Folio Views provides a complete picture of the contents of CCI. Expanding any heading of interest provides more detail on that topic.

## Coding instructions

CCI is designed to reduce the number of codes required to adequately capture intervention data. To accomplish this, there are many composite codes where two or more potentially stand-alone interventions are built into one code. There are instances, however, where it is impossible to include all possible combinations in the same code; in those cases, it is necessary to use multiple codes. In yet other instances, it is desirable to have separate codes for given aspects of a particular intervention.

To assist with the selection of a composite code or the requirement for multiple codes, there are instructions built into CCI that provide relevant direction about code assignment at the block level, group level, rubric level and code level throughout the classification. It is important to read, understand and follow these instructions.

### Important note

Care must be taken to determine the level at which an instruction applies. Generally, instructions at the block level apply to all codes within the block; instructions at the group level apply to all codes within the group; instructions at the rubric level apply to all codes within the rubric; and instructions at the code level apply to that code only.

## Inclusions

Inclusion terms (also referred to as “inclusions”) are meant to serve as a guide to what is contained in the block, group, rubric and/or code. Inclusions include applicable anatomy sites, alternative descriptions of the intervention, synonyms and eponyms.

### Important note

CCI does not provide an exhaustive (all-inclusive) list of inclusions throughout the classification. Inclusions are representative of what is included at that level and are not intended to restrict users to these terms alone. Users can and should use all of their knowledge to classify cases that use different terminology to the appropriate code.

**Example:** At rubric 1.YM.87.^^ *Excision partial, breast*, the inclusions provide direction that

- A partial mastectomy is classified to this **rubric**; and
- Transaxillary endoscopic partial mastectomy (TEPM) is included with the **code** 1.YM.87.DA as indicated in the pop-up window available by clicking the ++ beside the code.

These are just two of the inclusions listed for this rubric. Although it is not specifically recorded as an inclusion, this rubric also includes “excision lesion breast” because its intention is to partially excise the breast.

### Tip

When the phrase “that with” is seen in an **inclusion**, it is an indication that an additional code is not required. The intervention in the “that with” statement is an inherent part of the intervention and does not need to be classified separately.

**Example:** Rubric 1.CD.52.^^ *Drainage, sclera* includes that with or without an iridectomy. The iridectomy is not captured separately.

**1.CD.52.^^ Drainage, sclera**

*Includes:* Fistulization, sclera
that for glaucoma
that with or without iridectomy

## Exclusions

Exclusion terms (also referred to as “exclusions”) are also found at the block, group, rubric and/or code level throughout the classification. Exclusion terms are meant to alert the user that although the intervention being coded may appear to be classified here, it is, in fact, classified elsewhere. The coder is then directed to another location within the classification. One such circumstance is when the intervention being assigned a code is comprised of a combination of connected interventions (which themselves can be performed individually): the classification guides the user to the code that best fits that combination of interconnected interventions. Another circumstance is when the classification is warning the user that a particular anatomy site is not included here or that a particular type of intervention is not included here.

### Important note

What an exclusion term does **not** mean is that any given two codes are *always* mutually exclusive. *Sometimes* the user can use them together — **if and when** the circumstances warrant such use. This is the case when both codes are required to fully capture the intervention performed and no one of the codes includes everything that has been done.

### Key point

Exclusions prompt users to ask themselves, “Is this is where I want to be?” Based on the documentation, the user elects to 1) make a selection from this location; 2) go to another location; or 3) make a selection from both locations if the circumstances warrant.

**Example 1:** Rubric 2.NQ.70.^^ *Inspection, rectum* excludes trans-rectal examination of prostate. If the sole intervention being captured is trans-rectal examination of the prostate, select the appropriate code from rubric 2.QT.70.^^ *Inspection, prostate* only. If the patient had both a proctoscopy and a trans-rectal examination of the prostate, select the appropriate code from both rubric 2.NQ.70.^^ and rubric 2.QT.70.^^, as they are two distinct interventions.

**2.NQ.70.^^ Inspection, rectum**

*Includes:* Examination, rectum
Proctoscopy
Rectoscopy

*Excludes:* Examination of prostate, trans- rectal (see 2.QT.70.^^)
Inspection of rectum and large intestine (see 2.NM.70.^^)
Proctosigmoidoscopy (see 2.NM.70.^^)

**2.QT.70.^^ Inspection, prostate**

*Includes:* Examination, prostate, trans rectal digital

**Example 2:** At rubric 1.OE.52.^^ *Drainage, bile ducts*, an exclusion provides direction that when there is dilation with drainage, it is classified to rubric 1.OE.50.^^ *Dilation, bile ducts* and **not** to rubric 1.OE.52.^^. At 1.OE.50.^^ *Dilation, bile ducts*, it does not say drainage is included here; this is implied from the exclusion at 1.OE.52.^^ *Drainage, bile ducts*.

**1.OE.52.^^ Drainage, bile ducts**

*Includes:* Choledocho(s)tomy [for drainage or decompression]
Decompression, bile duct
Hepatocholedocho(s)tomy [for drainage or decompression]
Insertion, bile duct, nasobiliary catheter [for drainage]
Insertion, bile duct, T-tube, stent or catheter [for drainage]

*Excludes:* Choledochotomy for dilation (see 1.OE.50.^^)
Dilation with drainage, bile duct (see 1.OE.50.^^)
Drainage, bile duct, using bypass procedure (see 1.OE.76.^^)
Hepatocholedochotomy for dilation (see 1.OE.50.^^)
Insertion, bile duct, indwelling stent or catheter for dilation (see 1.OE.50.^^)

## Tips

- When the excludes notes say to "see" rubric such-and-such (e.g., "see 2.QT.70.^^"), this means the user should review and compare both rubrics before making a selection, not that the user should unquestioningly go to the rubric noted in the exclusion.
- When the phrase "that with" or "that done with" is seen in an exclusion, it is an indication to move on to that rubric.

**Example 3:** Rubric 1.CH.87.^^ *Excision partial, iris* excludes that done with a sclera fistulization performed during the same intervention episode (see 1.CD.52.^^). Go to rubric 1.CD.52.^^ *Drainage, sclera* and make a code selection from there.

**1.CH.87.^^ Excision partial, iris**

*Includes:*
Corectomy
Discission
Excision, prolapsed iris
Iridectomy (peripheral)
Iridectomy (sector)
Iridocystectomy (peripheral)
Iridosclerotomy
Iridotomy NOS (laser)
Puncture
Pupillotomy
Sphincterotomy of iris
that for drainage (for glaucoma)
that with conjunctival flap raised for access to the iris

*Excludes:*
that done with simultaneous lens extraction (see 1.CL.89.^^)
that done with trabeculectomy (see 1.CJ.52.^^)
that with scleral fistulization (see 1.CD.52.^^)

## Code also

"Code also" instructions are meant to direct the coder to assign an additional code for specific components or subsequent steps of an intervention when it is not possible or desirable to build the complexity of the intervention into one code. In this circumstance, the "code also" code(s) is assigned (on a mandatory or optional basis) **when the "code also" intervention has taken place**. "Code also" instructions are most often found at the rubric level but may also be located at the code level.

## Important note

If the intervention in the "code also" instruction was performed, the additional code is mandatory to capture if it meets the criteria for mandatory code selection as specified in the coding standards (i.e., *Selection of Interventions to Code for Ambulatory Care (Emergency, Clinic and Day Surgery Visits*) or *Selection of Interventions to Code for Acute Inpatient Care*). Otherwise, it is coded only if deemed necessary by the collecting facility.

**Example:** At rubric 1.HT.90.^^ *Excision total with reconstruction, pulmonary valve*, there is an instruction to "code also" any cardiopulmonary bypass that occurs during the excision with reconstruction of the pulmonary valve. At rubric 1.LZ.37.^^ *Installation of external appliance, circulatory system NEC*, there are two codes for cardiopulmonary bypass — 1.LZ.37.GP-GB when there is a percutaneous transluminal (closed chest) approach and 1.LZ.37.LA-GB when there is an open (chest) approach. As these interventions employ either a percutaneous transluminal approach or an open approach, one of these codes must also be captured if cardiopulmonary bypass is employed.

**1.HT.90.^^ Excision total with reconstruction, pulmonary valve**

*Includes:* Replacement with excision of pulmonary valve
Replacement, pulmonary valve

*Excludes:* Pulmonary valve replacement without excision of the native valve (see 1.HT.80.^^)
Repair, endocardial cushion defect (see 1.LC.84.^^)
Repair, valvular defect associated with atrial and ventricular septal defects (see 1.LC.84.^^)

*Code Also:* Any concomitant cardiopulmonary bypass (see 1.LZ.37.^^)
Any concomitant repair or replacement of other valve

| 1.LZ.37.^^ Installation of external appliance, circulatory system NEC | percutaneous transluminal (closed chest) approach | open (chest) approach |
|---|---|---|
| **cardiopulmonary bypass (intraoperative)** | 1.LZ.37.GP-GB++ | 1.LZ.37.LA-GB++ |
| **extracorporeal blood salvage device (cell saver) (intraoperative)** | - - - | 1.LZ.37.LA-FP++ |
| **extracorporeal membrane oxygenator [ECMO]** | 1.LZ.37.GP-QM++ | - - - |

## Caution

The "code also" instructions located throughout CCI do not cover every possible circumstance where multiple codes are required. Coders must always ensure that all significant interventions performed during an intervention episode are captured and meet the minimum requirements for code selection as laid out in the coding standards (i.e., *Selection of Interventions to Code for Ambulatory Care (Emergency, Clinic and Day Surgery Visits*) or *Selection of Interventions to Code for Acute Inpatient Care*).

## Notes

Explanatory notes are included to assist coders with proper code selection and are found primarily at the rubric and/or code level throughout CCI. They tend to be general, informal and educational in nature, and their purpose is to help eliminate possible confusion and provide greater confidence during code selection.

Explanatory notes are **not** meant to describe every detail or the exact nature of all possible interventions classified to that rubric and/or code. They can be used to

- Describe what *may* be included in an intervention, for example, "may involve gastrorrhaphy";
- Identify what tissues are included in a radical excision, for example, "en bloc resection of esophagus involves adjacent tissues such as: arteries, veins, pleura, diaphragm, pericardium, regional lymph nodes . . .";
- Provide direction for accurate code assignment, for example, "when initial laparoscopy or thoracoscopy is performed for exploration, and resection is then performed through open incision, use open approach"; and
- Offer definitions or descriptions to use for code selection, for example, "a classical Blalock-Taussig is done with autologous tissue and becomes a 'modified' Blalock-Taussig shunt when done with synthetic material."

## Omit code

"Omit code" instructions are found at the rubric and/or code levels throughout CCI and are meant to direct the coder that this code is **not** required in the stated circumstances.

## Important note

It is mandatory to comply with the direction to omit a code in the stated circumstances.

"Omit code" instructions may do the following:

- Direct coders that the intervention to which the "omit code" is referring is the **operative approach**. For example, at rubric 1.EA.87.^^ *Excision partial, cranium*, the instruction "Omit Code: When craniectomy is operative approach (for access) to intracranial tissue" means to not use a code from 1.EA.87.^^ when a craniectomy is the operative approach (for access) to perform an intervention on intracranial tissue.
- Alert coders that the intervention to which the "omit code" is referring is considered an **integral part of a more complex intervention**. For example, at 1.GX.80.^^ *Repair, diaphragm*, the instruction "Omit Code: when performed concomitantly with repair of esophagus (see 1.NA.80.^^)" means to not use a code from 1.GX.80.^^ when an intervention from 1.NA.80.^^ is performed at the same time. In other words, in these circumstances the repair of the diaphragm is included in the repair of the esophagus.
- Tell coders that a code is **not required at all**. For example, at rubric 1.HB.54.^^ *Management of internal device, epicardium*, the instruction "Omit Code: Repositioning of temporary transvenous pacemaker system" means when the pacemaker system is temporary (versus permanent), a code for repositioning is not captured.

## Code all that apply

In Section 5 of CCI, Obstetrical and Fetal Interventions, there are a few rubrics at which the instruction "code all that apply" (or a variation of this wording) appears.

**Example:** Rubric 5.PC.91.^^ *Interventions to uterus (following delivery or abortion)* instructs "code all that apply." If, following delivery, the patient has both manual removal of the placenta and uterine packing, both 5.PC.91.HN and 5.PC.91.HT are captured. As the generic intervention number for these codes is greater than 40, both of these codes must be captured.

**5.PC.91.^^ Interventions to uterus (following delivery or abortion)**

| | |
|---|---|
| *Excludes:* | Control of postpartum hemorrhage by embolization of pelvic vessels (see 1.RM.13.^^) |
| | Control of postpartum hemorrhage by ligation of pelvic vessels (see 1.KT.51.^^) |
| | Removal of blighted ovum (see 5.CA.89.^^) |
| *Note:* | Code all that apply. |
| 5.PC.91.GA | dilation and curettage |
| 5.PC.91.GC | aspiration and curettage |
| 5.PC.91.GD | dilation and evacuation [D&E] |
| *Includes:* | removal of missed abortion with (surgical) forceps |
| 5.PC.91.HN | manual removal of placenta from uterus (e.g. Brandt Andrews maneuver) |

| | |
|---|---|
| *Omit Code:* | When only gentle traction on placenta from vagina is used |
| 5.PC.91.HP | manual correction of inverted uterus |
| 5.PC.91.HQ | surgical correction of inverted uterus |
| 5.PC.91.HR | manual exploration of uterine cavity |
| 5.PC.91.HT | uterine (and vaginal) packing |
| *Includes:* | Tamponade (for control of postpartum hemorrhage)<br>that with or without (temporary) cervical cerclage for retention of packing |
| 5.PC.91.HU | bimanual compression and massage |
| *Includes:* | Non surgical control of postpartum hemorrhage |
| 5.PC.91.HV | compression using intrauterine balloon |
| *Includes:* | that for control of postpartum hemorrhage |
| 5.PC.91.LA | suturing of uterus |
| *Includes:* | B-Lynch suture (for postpartum hemorrhage) |

## Important note

Where a “code all that apply” instruction appears, assigning one or more codes from that rubric is mandatory only when the codes themselves are mandatory to collect, as specified in the coding standards (i.e., *Selection of Interventions to Code for Ambulatory Care (Emergency, Clinic and Day Surgery Visits*) or *Selection of Interventions to Code for Acute Inpatient Care*). Otherwise, the code or codes are captured only if deemed necessary by the collecting facility.

## Caution

The “code all that apply” instructions in CCI do not cover every possible circumstance where more than one code from the same rubric may be assigned. While assigning more than one code from the same rubric is a severely restricted practice, there are occasions when this is appropriate. See Section 3.3: When multiple intervention codes are assigned for details regarding selecting more than one code from the same rubric.

# Coding conventions

Conventions are methods, graphic or written, intended to consistently convey a certain meaning or conform to a certain style. Conventions in CCI are generally an alternate (condensed) way to indicate what is included (or not). It is important to be familiar with and understand the coding conventions embedded in CCI, because they provide direction and clues to whether you are or are not at the right rubric or code.

## And/or

When used with anatomy sites, the term “and” in CCI means “and/or.”

For example, when a code from 1.TV.74.^^ *Fixation, radius and ulna* is selected, it may mean the fixation was performed on the radius **and** the ulna; the fixation was performed on the radius **alone**; or the fixation was performed on the ulna **alone**.

## With

The term “with” in CCI means both entities must apply in order to make this selection.

For example, to select a code from 1.CX.88.^^ *Excision partial with reconstruction, eyelid NEC*, both a partial excision and a reconstruction of the eyelid (NEC) must be performed during the same intervention episode. An example that applies to the anatomic site (versus intervention) is 1.EF.73.^^ *Reduction, maxilla with mandible.* Both the maxilla (upper jaw) and the mandible (lower jaw) must be reduced during the same intervention episode to select a code from this rubric.

## Parentheses

Parentheses **( )** in CCI enclose **supplementary terms** that modify the rubric or code description without affecting the code selection; in other words, they are nonessential modifiers that may or may not be present in the description of the intervention.

For example, at 1.RF.51.^^ *Occlusion, fallopian tube*, the terms “and division” and “for sterilization” are enclosed in parentheses in the following inclusion: “Ligation (and division), fallopian tube (for sterilization).” The correct interpretation of the way this inclusion is recorded is that this is the correct rubric for a ligation of the fallopian tube, with or without division of the fallopian tube, for purposes of sterilization or for a different purpose.

Parentheses are also used to list **examples** and to routinely **enclose the rubric** (jump link) to which an exclusion note refers.

For example, at 1.OT.58.LA-XX-F *Procurement, abdominal cavity of free flap (e.g. omental flap), using open approach*, the terms “e.g. omental flap” are included in parentheses as an example of a type of free flap classified there. This is an example only and does **not** preclude the use of this code when procurement of another type of free flap is appropriately classified to 1.OT.58.LA-XX-F.

### Important note

Terms included in parentheses are examples only. They are not intended to be all-inclusive. The fact that a term is not included does not preclude the use of the rubric or code.

## Square brackets

Square brackets **[ ]** are used to enclose **synonyms**, **alternate terms** [meaning the same thing] or **explanatory phrases**.

For example, at 1.RB.59.^^ *Destruction, ovary*, the term “nerve destruction” is enclosed in square brackets in the following inclusion: “Denervation of ovary [nerve destruction].” Denervation means destruction of a nerve, and the two terms are used interchangeably; no matter which way it is documented, both terms are classified here. This is in contrast to the other inclusion that appears at this rubric: “Drilling, ovary.” Drilling is not the same as nerve destruction, but it too is included at this rubric.

### Important note

Terms included in square brackets are examples only. They are not intended to be all-inclusive. The fact that a synonym or alternate term is not included does not preclude the use of the rubric or code.

### Note

Synonyms and alternate terms are included in CCI to make searches for the correct code as robust as possible. They help ensure you will hit on the appropriate rubric regardless of what term has been used in the documentation.

## Eponyms

Eponyms are personal names assigned to interventions. Eponyms are usually used to name a technique or an intervention in honour of or to identify the person who invented the intervention or was the first to perform the intervention. There is no one way or place eponyms appear in CCI. They can, for example, be enclosed in square brackets or found in a note or inclusion.

For example, a *valve-sparing Bentall procedure* — so named because it was first described by Dr. Hugh Bentall in 1968 — also known as the *David procedure* — so named because it was developed by Toronto cardiovascular surgeon Dr. Tirone David — are inclusions at 1.ID.87.LA-XX-N *Excision partial, aorta NEC using open approach with synthetic material [e.g. Dacron patch] Includes: David procedure, ascending aorta; Valve sparing Bentall procedure, ascending aorta*.

### Important note

Because it is built on the principle of generic intent, there are few eponyms listed in CCI. In fact, the sole use of eponyms as a basis for code selection is discouraged. It is good practice to verify that the documented description of the intervention supports the code selection, as sometimes procedures are modified to address individual circumstances and are no longer classifiable to the code for the eponymous intervention because the generic intent is now different.

### Tip

Do not hesitate to confirm the code selection with the health care providers who commonly use these terms to describe their interventions.

## NEC

In CCI, NEC is the abbreviation for “not elsewhere classified.” This abbreviation alerts the coder that there may be another location in the classification more specific to what intervention is being performed and/or on which anatomy site. Only when the other location has been ruled out should this rubric/code be used.

For example, interventions performed on particular sites of the skin that are not specifically classified elsewhere are classified to group 1.YZ.^^.^^ *Therapeutic Interventions on Skin NEC*. This group includes *skin of overlapping sites of body NEC*; that is, the sites *are* overlapping but they are *not elsewhere classified*. An exclusion note directs that if the skin sites of face, scalp and neck are overlapping, they are classified to a different group (1.YF.^^.^^ *Therapeutic Interventions on Skin of Face*).

### Tip

NEC basically means this is a residual (leftover) grouping (e.g., pertaining to anatomy sites); there are other related groupings that are more specific; and this one contains anything else that is specific but is not in more specific groupings. Users should examine all of the related inclusions and exclusions, asking, for example, "Is this anatomy site included at this block or group? Is there a more specific rubric or code for this particular type of intervention? Is there a more specific device available?"

### Key point

If there is a more specific grouping, do **not** use the residual (NEC) grouping — use the more specific one.

## NOS

In CCI, NOS is the abbreviation for "not otherwise specified." NOS is used when the documentation either does not provide the detail necessary to select a more specific code available; or the documentation is detailed enough but there is not a more specific code available.

For example, mammoplasty that is not otherwise specified in the documentation is classified to rubric 1.YM.79.^^ *Repair by increasing size, breast*. When the documentation indicates a mammoplasty was performed and there are no further details in the documentation to support classifying a mammoplasty elsewhere, by default, it is classified to 1.YM.79.^^. Here again, coders must review the inclusions and exclusions to satisfy themselves that this is the appropriate place in the classification for what is being classified. For example, if the intervention performed is a mammoplasty concomitant with mastectomy, there is an exclusion at 1.YM.79.^^ for this [*Excludes*: Mammoplasty concomitant with mastectomy (see 1.YM.88.^^, 1.YM.90.^^, 1.YM.92.^^)]; the mammoplasty is included in/classified to another rubric.

## Caret symbols (^^)

Caret symbols (^^) are used in CCI to indicate more detail is required to complete the code. The code is not complete until additional characters for one or more qualifiers are added.

For example, 2.GT.^^.^^ *Diagnostic Interventions on the Lung NEC* is not a complete code; it is a group — the type of intervention and at least one qualifier must be added. Likewise, 2.GT.71.^^ *Biopsy, lung NEC* is not a complete code; it is a rubric. At this rubric, there are a number of complete codes available for selection based on the type of approach for the biopsy.

### Tip

Caret symbols are inserted only up to the minimum characters required for any CCI code. They are not indicative of the number of characters that must be supplied to constitute a complete code for any particular intervention.

### Note

While an incomplete set of characters does not constitute a complete code, some users will find these character sets useful for producing aggregate data: How many diagnostic interventions were performed on the lung? How many lung biopsies were performed? This is referred to as “rolling up” the classification to the rubric or group level.

## Knowledge checks

Complete the following knowledge checks and then review the answers in Appendix A. If you answered any questions incorrectly, it is recommended you go back and review the relevant information within this section.

**Question 1**

Choose T for true or F for false for the following statement:

**T** **F** For the code 1.PC.85.LA-XX-J, the second field (PC) represents the anatomy site group on which the intervention was performed.

**Question 2**

Choose T for true or F for false for the following statement:

**T** **F** An attribute is part of a completed CCI code.

**Question 3**

Choose T for true or F for false for the following statement:

**T** **F** The rubric 1.RM.26.^^ *Brachytherapy, uterus and surrounding structures* only includes brachytherapy that is performed on both the uterus and its surrounding structures.

**Question 4**

Choose all that apply:

The rubric 1.RM.87.^^ *Excision partial, uterus and surrounding structures* contains the following inclusion — “Endometrectomy (with dilation).” Based on how this inclusion is recorded, circle all of the choices below that are included in this rubric:

Endometrectomy only

Endometrectomy with dilation

Endometrectomy without dilation

**Question 5**

Choose the one correct answer:

The rubric 1.BB.55.^^ *Removal of device, nerves of head and neck NEC* contains the following inclusions and exclusions:

**1.BB.55.^^ Removal of device, nerves of head and neck NEC**

*Includes:* Removal of electrodes (of pacemaker), vagal nerve

Removal of extracranially implanted neurostimulator device, head and neck

*Excludes:* Removal of intracranially implanted neurostimulator device, head (see 1.BA.55.^^)

Removal of pulse generator/battery, neurostimulator (see 1.YY.55.^^)

Based on the code title of the rubric (Removal of device, nerves of head and neck NEC) and the inclusions and exclusions, which of the following statements about what is included in this rubric **is true**?

Removal of both extracranially implanted and intracranially implanted neurostimulator devices of the head are included in this rubric.

Removal of device for all nerves of the head and neck is included in this rubric.

Removal of pacemaker electrodes from vagal nerve is included in this rubric.

# Section 2.2: Using Folio Views

## Introduction

CCI is stored electronically in the Folio Views software (infobase), which facilitates quick and easy searches for codes and other uses. This section mainly contains information relevant to using this tool to locate the code of choice.

## Searching with Folio Views

### Query icons

The primary method used to locate the code of choice is the four "query" icons (which look like binoculars) located in the bottom left of the screen in Folio Views.

| Icon | Description |
|---|---|
|  | Advanced Query |
|  | 1 — Tabular List Query |
|  | 2 — Alphabetical Index Query |
|  | 3 — Table of Agents Query |

The **advanced query** is the larger, first, unnumbered binocular icon. The advanced query function can also be accessed via the **F2** key. The advanced query searches **both** the tabular list and the alphabetical index — first the tabular list and then the alphabetical index — for the search term(s) entered (e.g., *repair skin arm*).

The **tabular list query** is the binocular icon labelled "**1**." The tabular list query function can also be accessed via the **Ctrl + 1** keys. The tabular list query searches the entire **tabular list only** for the search term(s) entered. The tabular list query also has the ability to search coding instructions (inclusion, exclusion, code also, notes and omit code); however, only one coding instruction can be searched at a time.

The **alphabetical index query** is the binocular icon labelled "**2**." The alphabetical index query function can also be accessed via the **Ctrl + 2** keys. The alphabetical index query searches the **alphabetical index only** for the search term(s) entered.

The **table of agents query** is the binocular icon labelled "**3**." The table of agents function can also be accessed via the **Ctrl + 3** keys. The table of agents searches **Appendix D** — Pharmacological, Biological and Other Agents: Table of Conversions for CCI Code Component to ATC Code for the search term(s) entered (e.g., *ampicillin*).

### Important note

Unlike ICD-10-CA, CCI contains as many inclusions or more in the tabular list as in the alphabetical index. Thus, the tabular list should be searched first when using CCI, whereas, the alphabetical index is searched first when using ICD-10-CA.

In CCI, the tabular list is searched first whether using the **advanced query** or **tabular list query** function.

## Limiting the search

The key to an effective search of the classification for a code is determining the most appropriate term(s) on which to search. When using CCI, this means having a solid knowledge and understanding of the classification overall and of the definitions for interventions and the concept of **generic intent** in particular.

**Note:** Generic intent and intervention definitions are discussed in detail in Section 3.3: Generic intent (generic interventions).

Ideally, when searching for a term you want fewer than five hits (a hit is a record [location] containing the term(s) you are looking for). To refine or limit your search, enter a lead term and just two or three subterms. The more exact and specific you can be, the more success you will have. For example, searching the first field entitled Query For using the tabular list query on the terms "excision intestine" gets **18** hits; "excision large intestine" gets **9** hits; and "excision partial large intestine" gets **4** hits.

## Navigating

There are a number of ways to move through the Folio Views infobase.

## Folio Views icons

| Icon | Action | Icon | Action |
|---|---|---|---|
|  | Move to the previous partition hit with query result |  | Move to the next partition hit with query result |
|  | Move to the previous query result (hit) in the document window |  | Move to the next query result (hit) in the document window |
|  | Go back from a link |  | Go forward from a link |
|  | Show history |  | Go to (jump to a specific code) |

**i)** Use the **Next Partition Hit** icon (small double arrows pointing to the right) or the **F5** key to move to the **next rubric** that contains any of the search terms. The next partition hit jumps directly from one rubric level to the next rubric level; it does not stop off at each search term that may be within the rubric. Use the **Previous Partition Hit** icon (small double arrows pointing to the left) or the **Shift + F5** keys to move back to the previous rubric.

Use the **Next Hit** icon (large double arrows pointing to the right) or the **F4** key to move to the **next place** the search term(s) appears. The next hit stops at each line within a rubric that contains a search term and then goes on to the next rubric, line by line. Use the **Previous Hit** icon (large double arrows pointing to the left) or the **Shift + F4** keys to move back to the previous place the term appears.

**ii)** Use the **Go Back** arrow (large single arrow pointing to the left) or the **F6** key to return to the previous action performed; use the **Go Forward** arrow (large single arrow pointing to the right) or the **Shift + F6** keys to move to the subsequent action performed.

**iii)** Use the **Show History** icon (looks like small footprints) to see a record of the searches performed during the current access to the classification and go to one of the previous searches using this feature. **Note:** Once you exit the classification, the history is lost.

**iv)** When you already know where you want to go within the tabular list, use the **Go To** icon (green hinged arrow) or the **Ctrl + G** keys to go directly to that location.

For example, enter “1QT” in the **Go To** dialogue box, then click the **Go To** icon to go directly to the top of the therapeutic interventions (1) performed on the prostate (QT); or enter “1QT26” to go directly to the rubric for brachytherapy (26) of prostate.

### Tip

It is not necessary to include punctuation when using the **Go To** function. For example, enter "1OT80LA" to go directly to the code 1.OT.80.LA.

**v)** The infobase can also be searched by using the **Table of Contents** (located in the **Contents** tab in Folio Views). The Table of Contents can be expanded or collapsed by clicking the **+** (plus) or **–** (minus) signs, respectively. The location of your choice within CCI can be selected from the Table of Contents by double-clicking any particular line, each of which is a hyperlink to that location within the document.

For example, double-clicking **1.EB.74.^^** *Fixation, zygoma* in the expanded list of Section 1 — Physical/Physiological Therapeutic interventions; the expanded list of Tabular List of Therapeutic Interventions; the expanded list of Therapeutic Interventions on Musculoskeletal Tissue of Head, Nasal Cavity and Sinuses (1EA-1EY); and the expanded list of Therapeutic Interventions on the zygoma will take you to rubric **1.EB.74.^^** and its contents in the tabular list.

## Spelling

Terms used throughout the classification are a mixture of American spelling and British spelling, because both spellings are commonly used in Canada. For example, the American spelling "pediatric" and the British spelling "paediatric" can both be found in the classification.

### Tip

Use an asterisk (*) (wild card) to replace the uncertain portion of a term when you are uncertain of the spelling. The search engine will then find alternate spellings of the term wherever they appear in the classification. For example, entering "p*diatric" will lead to both "pediatric" and "paediatric."

A variation of this is to use an asterisk to locate all permutations of a term; for example, entering "adjust*" will locate "adjustable," "adjustment" and "adjusting."

The **word wheel** is also a useful tool for locating the word you want. As you type a word in the dialogue box letter-by-letter, watch the word wheel to see the words it brings forward that are included in CCI. For example, as you enter the letters "f-i-x," the words "fixated," "fixation," "fixative," "fixator," "fixed" and "fixing" all appear. From the list you can select the word you want instead of typing the whole word. Noteworthy also is that words seen in the word wheel are the only variations on the word in CCI.

## Wild cards

A wild card is a character or symbol whose value can vary. The asterisk symbol can be used in CCI to replace parts of words or codes in order to find all possible values of interest for the search at hand.

The use of wild cards with words is described in Section 2.2: Spelling. This section describes one use with codes.

For reporting purposes, a user may want to identify all bypasses performed in the health region for a period of time. Searching by entering “1.**.76” in the advanced query dialogue box will readily locate the rubrics for bypasses (generic intervention “76”) on all anatomy sites (“**” in anatomy site field). From this search, the rubrics and/or codes of interest can be selected, and statistics can be extracted and reported based on these.

### Tip

Keep the following in mind when using wild cards to replace a field(s) in the CCI code:

1) The correct punctuation must be inserted;
2) The majority of wild card searches can be performed only up to the seven-character (first qualifier) level — for example, 1.**.**.LA; and
3) A wild card can consist of either a single asterisk or a double asterisk; for example, 1.*.76 and 1.**.76 provide the same results.

# Knowledge checks

Complete the following knowledge checks and then review the answers in Appendix A. If you answered any questions incorrectly, it is recommended you go back and review the relevant information within this section.

**Question 1**

Choose T for true or F for false for the following statement:

**T** **F** When searching for a term using Folio Views, it is best to search the tabular list first, as there is more inclusions in the tabular list than in the alphabetical index in CCI.

**Question 2**

Choose T for true or F for false for the following statement:

**T** **F** If you use the **Next Hit** icon (large double arrows pointing forward), Folio Views will jump from one rubric to the next rubric that contains any of the search terms without stopping off at any of the search terms where they appear within the rubric.

**Question 3**

Choose T for true or F for false for the following statement:

**T** **F** If you know part or all of the code that you are considering assigning, entering the characters of the code without punctuation using the **Go To** icon (green hinged arrow) will take you there directly.

**Question 4**

Choose T for true or F for false for the following statement:

**T** **F** Entering **1.AN.**** using the **Advanced Query** function will locate all of the rubrics for therapeutic interventions performed on the brain. *Tip:* The anatomy site group for the brain is AN.

# Chapter 3: Using CCI — Field by field

## Chapter overview

This chapter touches separately on each of the CCI code components (fields) that were introduced in Chapter 2. This approach allows for a more in-depth look at each component of the code, an opportunity to explore some of the problems related to a particular component and a chance for focused knowledge checks along the way.

Chapter 3 consists of the following sections:

- Section 3.1: Field 1 — Section
- Section 3.2: Field 2 — Anatomy Site (Group)
- Section 3.3: Field 3 — Intervention
- Section 3.4: Field 4 — Qualifier 1: Approach/technique
- Section 3.5: Field 5 — Qualifier 2: Agent or device
- Section 3.6: Field 6 — Qualifier 3: Tissue
- Section 3.7: Attributes

## Section 3.1: Field 1 — Section

### Introduction

The tabular list consists of seven sections based on the broad realm of the interventions in that section. The section number makes up the first field of the CCI code and consists of one numeric character. For example:

**1**.YG.80.JA-XX-P  Repair, skin of neck using cultured tissue

Users of CCI do not ordinarily have to make a deliberate selection of the appropriate section of CCI for code assignment: following the steps for looking up a code will lead to the proper section. Users do, however, require a sufficient understanding of the overall structure of the sections to **confirm** that the code selected is from the correct section and to properly **apply** coding standards for particular sections.

# Overview

The seven sections in CCI are the following:

- **Section 1** — Physical/Physiological Therapeutic Interventions
- **Section 2** — Diagnostic Interventions
- **Section 3** — Diagnostic Imaging Interventions
- **Section 5** — Obstetrical and Fetal Interventions
- **Section 6** — Cognitive, Psychosocial and Sensory Diagnostic and Therapeutic Interventions
- **Section 7** — Other Healthcare Interventions
- **Section 8** — Therapeutic Interventions Strengthening the Immune System and/or Genetic Composition

The difference between each section is attributable to the general nature of the interventions within the section: there are interventions that treat a diseased state (Section 1); help identify the specific condition requiring treatment (sections 2 and 3); are exclusive to care during pregnancy and childbirth (Section 5); involve care of the whole body and mind (Section 6); are supportive (Section 7); and protect against disease (Section 8).

One of the key features of CCI is its service-provider and service-setting neutrality. The classification has been developed in such a way that modes of practice are not reflected in the code structure. Therefore, all codes within each section are intended to be applicable to any care provider (e.g., physician, nurse or respiratory technologist performing the intervention) and in any setting (e.g., operating room, emergency department, clinic, physician's office or even the patient's home).

## Further resources

Using the Table of Contents in CCI, refer to Introduction to CCI and Definition of Healthcare Intervention (i.e., therapeutic intervention, diagnostic intervention, obstetrical and fetal intervention, other intervention). Information on the CCI code structure is found in Appendix A — CCI Code Structure (including a CCI decision tree for assigning interventions to sections).

# Requirements for code assignment (what is mandatory, what is optional)

The coding standards *Selection of Interventions to Code for Ambulatory Care (Emergency, Clinic and Day Surgery Visits)* and *Selection of Interventions to Code for Acute Inpatient Care* identify the interventions that are mandatory to routinely capture on a national basis for ambulatory care and acute inpatient care. The interventions that must be collected are dependent on the CCI section — there are select criteria in the coding standards for code assignment from sections 1, 2, 3 and 5. The select criteria are based on a variety of factors, including the hierarchy of codes (intervention number) within the section; the intervention location (where the intervention is performed); and the operative approach (method of access to the operative site). Additional listed mandatory codes are based on the overall impact of particular types of interventions.

Over and above the mandatory national requirements (as directed in the above-named coding standards), facilities or provinces/territories may instruct their coders to routinely capture additional CCI codes to meet their reporting requirements. When this is the case, facilities are encouraged to document the optional requirements and have them readily accessible to coders and other CCI users.

## Caution

Individual coders are discouraged from capturing CCI codes that are not part of the mandatory requirements or facility-specific requirements. Variable code assignment patterns result in data that is not useful because of its inconsistent collection.

# Therapeutic interventions versus diagnostic interventions

## CCI definition: Therapeutic intervention

A service performed for or on behalf of a client whose basic purpose is to improve health, alter the course of a disease or health condition, or promote wellness. While a therapeutic intervention may contain a diagnostic component, the primary intent of the intervention is to alleviate or treat the underlying disease or health condition.

## CCI definition: Diagnostic intervention

A service performed for or on behalf of a client whose basic purpose is to assess the presence, absence or status of a disease process or health condition.

As a general rule, when a diagnostic intervention from Section 2 is performed at the same time as a therapeutic intervention from Section 1 **at the same anatomy site**, the therapeutic intervention takes precedence. The therapeutic intervention is **mandatory** to capture, whereas the diagnostic intervention is optional to capture.

**Example:** A patient is admitted for a follow-up cystoscopic examination six months after excision of a bladder lesion. The physician notes a suspicious lesion at cystoscopy, takes a biopsy and then fulgurates the lesion using laser.

1.PM.59.BA-AG Destruction, bladder endoscopic per orifice approach, using laser

**Explanation:** The only mandatory CCI code for this scenario is the therapeutic intervention for fulguration (destruction) of the lesion. The cystoscopy (inspection) and biopsy are both diagnostic interventions that lead up to the therapeutic intervention. The physician's intent when bringing the patient in for follow-up is to inspect the bladder and, depending on the findings of the inspection, perform other interventions. In this example, a lesion is noticed and a decision made to perform a biopsy and proceed with fulgurating (destroying/removing) the lesion. When the therapeutic intervention (destruction) is accomplished during the same intervention episode as the cystoscopy and biopsy, destruction is the only intervention in the continuum that is of particular interest. Additional codes for the cystoscopy and/or biopsy are optional based on facility-specific requirements.

### Tip

Endoscopies can be undertaken either specifically for inspection purposes ("admit for cystoscopy"), which may result in a therapeutic intervention, or as the operative approach (which also always involves an inspection) ("admit for arthroscopic bursectomy right knee"). When an endoscopy is undertaken for inspection purposes and this leads to a therapeutic intervention, the endoscopy is then reflected as an operative approach (qualifier 1) for the therapeutic intervention and it is unnecessary to assign a separate code for the endoscopy. When an endoscopic approach is intended but the approach must be changed to an open approach, the therapeutic intervention code will reflect an open approach, and the attribute "converted" (converted from an endoscopic to an open approach) will be selected. Assigning a separate code for the endoscopy is unnecessary in these circumstances.

**Exceptions**

i) Sometimes, the diagnostic intervention that is performed in conjunction with a therapeutic intervention is of particular interest and it is **mandatory to collect it separately**. There are currently two circumstances where this applies:

   1. A therapeutic intervention performed during sigmoidoscopy or colonoscopy.

      In this circumstance, it is mandatory to also code the diagnostic intervention 2.NM.70.BA.^^ *Inspection, large intestine, using endoscopic per orifice approach (or via stoma)*…).

   2. A therapeutic intervention and a sentinel lymph node biopsy.

      In this circumstance, it is mandatory to also code the diagnostic intervention 2.M^.71.^^ *Biopsy, lymph node(s), any site* with extent attribute of "SN."

ii) Occasionally a situation arises where the converted attribute is not available to indicate that a planned endoscopic approach needed to be changed to an open approach. In this instance, the diagnostic intervention may also be captured to illustrate this.

**Example:** A patient was admitted for a laparoscopic uterine suspension, which was converted to an open approach for successful completion after the endoscopic approach failed to achieve the desired result.

1.RM.74.LA Fixation, uterus and surrounding structures using open approach

2.RM.70.DA Inspection, uterus and surrounding structures endoscopic [laparoscopic] approach NOS [optional]

**Explanation:** There is no converted attribute available at 1.RM.74.^^. A code for laparoscopy may also be assigned to show that the initial attempted approach was endoscopic.

## Further resources

For additional details, see the coding standards *Combined Diagnostic and Therapeutic Interventions*, *Sentinel Lymph Node Biopsy* and *Endoscopic Interventions*.

# Section 5 interventions

## CCI definition: Obstetrical and fetal intervention

A service performed for or on behalf of a pregnant client that pertains solely to the pregnancy or to the fetus. Since interventions performed during this state affect both mother and fetus(es), they have been treated separately from other diagnostic and therapeutic interventions.

**Section 5 — Obstetrical and Fetal Interventions** consists primarily of interventions that are performed uniquely on obstetrical patients or the fetus(es) they carry (i.e., interventions unique to the obstetric state). This section is subdivided into interventions performed before delivery (antepartum interventions); during labour and delivery (intrapartum interventions); and following delivery (postpartum interventions); and those performed directly on the fetus.

Certain interventions in Section 5 — for example, dilation and curettage — are not unique to the obstetric state. Codes for these interventions can be found in both Section 1 and Section 5. Where they are included in Section 5, they are used when they are performed during or immediately following the obstetrical experience (abortion and delivery). This facilitates the reporting of all obstetrical interventions of interest.

**Example:** The rubric 1.RM.87.^^ *Excision partial, uterus and surrounding structures* includes dilation and curettage (D & C) of the uterus. At this rubric, there are the following exclusions that lead to a Section 5 rubric when a D & C is performed during or following the obstetrical experience.

*Excludes:* D & C following delivery (see 5.PC.91.^^)
D & C for termination of pregnancy (see 5.CA.89.^^)
that for termination of pregnancy (see 5.CA.89.^^)

## Using codes from other sections for obstetrical cases

When an obstetrical patient has a non-obstetrical intervention performed for a condition that is not unique to the pregnant state or fetus, a code is selected from a section in CCI other than Section 5. The specific section from which a code is assigned depends on the nature of the intervention that is being performed (e.g., therapeutic, diagnostic imaging).

**Example:** The patient presents at 28 weeks gestation and is diagnosed with acute appendicitis. A laparoscopic appendectomy is performed.

1.NV.89.DA Excision total, appendix using endoscopic [laparoscopic] approach

## Newborn interventions

Following delivery, interventions that are performed for the newborn (neonate) are selected from a section in CCI other than Section 5. The specific section from which a code is assigned depends on the nature of the intervention that is being performed (e.g., therapeutic, diagnostic imaging). Section 5 interventions include those on the fetus but not on the newborn, with the exception of

- 5.MD.11.^^ Cord blood sampling
- 5.PB.01.AC Postpartum care postpartum (follow-up) visit

# Knowledge checks

Complete the following knowledge checks and then review the answers in Appendix A. If you answered any questions incorrectly, it is recommended you go back and review the relevant information within this section.

### Question 1

Choose T for true or F for false for the following statement:

**T** **F** The first character of a CCI code indicates whether the intervention performed is a medical intervention or a surgical intervention.

### Question 2

Choose T for true or F for false for the following statement:

**T** **F** A skin biopsy is assigned a code from Section 1 — Physical/Physiological Therapeutic Interventions.

### Question 3

Choose T for true or F for false for the statement that follows the clinical scenario:

Scenario: A patient presents for a colonoscopy, during which a polyp is visualized in the sigmoid colon and is removed.

**T** **F** In this scenario, the removal of the polyp is mandatory to capture, whereas the colonoscopy is optional to capture.

**Question 4**

Choose the one correct answer:

The patient presents at 30 weeks gestation for drainage of the amniotic sac to decrease the volume of fluid. The drainage of the amniotic sac is assigned a code from the following section in CCI.

Section 1 — Physical/Physiological Therapeutic Interventions

Section 2 — Diagnostic Interventions

Section 3 — Diagnostic Imaging Interventions

Section 5 — Obstetrical and Fetal Interventions

# Section 3.2: Field 2 — Anatomy Site (Group)

## Introduction

Each section of CCI is subdivided into homogenous groups that are the most relevant for that realm of interventions — for example, anatomy sites for therapeutic interventions (Section 1) and stage of pregnancy for obstetrical and fetal interventions (Section 5). For the purposes of this guide, this section will focus on anatomy site groups (used with sections 1, 2 and 3), as these are the most frequently used groupings. The anatomy site group makes up the second field of the CCI code and consists of a two-character alphabetic value. For example:

1.**YG**.80.JA-XX-P  Repair, skin of neck using cultured tissue

## Overview

The groups used in CCI by section are as follows:

- **Section 1** — Anatomy Site
- **Section 2** — Anatomy Site
- **Section 3** — Anatomy Site
- **Section 5** — Pregnancy (and Fetal Development) Stage
- **Section 6** — Mental, Physiological and Sensory Function
- **Section 7** — Other Healthcare Activities
- **Section 8** — Immune System and Genetic Composition Condition/State

This field of the CCI code is always a two-character alphabetic value, but what it represents depends on the CCI section. For example, **WA** represents the ankle joint in sections 1, 2 and 3; **AB** represents antepartum diagnostic interventions in Section 5; and **SP** represents interventions promoting health and preventing disease in Section 7.

### Further resources

Refer to Folio Views, Appendix A — CCI Code Structure, Groups, for the entire listing of groups within each section of CCI. These are a reference list (summary) only: a particular group may or may not be valid (available for use) for any given intervention.

## Anatomy sites in general

The anatomy site group of the CCI code is a two-character alphabetic value that describes **where** (at which site) the intervention was performed. Was it the hand? Brain? Subclavian artery? Kock pouch? Skene's duct?

Knowledge of some basic features of the anatomy site groups in CCI allows users to more confidently complete the task of assigning and using anatomy site groups for different purposes (e.g., coding, data analysis and reporting).

### Arrangement

i) The rubrics in sections 1, 2 and 3 are arranged by anatomy site in a **head to toe** fashion, starting with the Brain and Spinal Cord (A-) through Ankle and Foot (W-). The last two anatomy sites in each section are the Skin and Subcutaneous Tissue and Breast (Y-) and Total Body (Z-). While it was not possible to mirror the anatomical arrangement in the disease classification (ICD-10-CA), this classification and its arrangement were considered when establishing anatomy site groups for CCI.

ii) The arrangement (breakdown) of anatomy sites is **CCI-specific** and is primarily based on clinical relevance. There is no one way to arrange (break down) anatomy sites that will meet the needs of all users. Users must be familiar with the rules of the classification to better understand which sites are included where and why.

    For example, "cardioesophageal junction" is classified to anatomy site group NA Esophagus and not anatomy site group NF Stomach.

**Note:** Additional details about the arrangement of anatomy sites are described elsewhere in this section.

## Selecting the correct anatomy site

No classification can reasonably break down anatomical sites to their smallest level — nor is it desirable to do so. Nor is it possible, or desirable, to list all inclusions for a given site. Users must sometimes apply their knowledge of anatomy to the task at hand.

For example, the term “renal pyramid” is not included in CCI. By knowing (or learning by researching) that the renal pyramids are contained within the renal medulla, the intervention “percutaneous drainage of renal pyramid” is classified to drainage of the kidney (1.PC.52.^^ *Drainage, kidney*) and not drainage of the renal pelvis (1.PE.52.^^ *Drainage, renal pelvis*), because the anatomy site group PC includes renal medulla.

**Note:** More specific details related to unique site selection circumstances are described elsewhere in this section.

## Specific sites versus general sites

i) For some anatomy sites, a detailed breakdown is provided because it is clinically relevant (e.g., different types of interventions are performed on particular parts of that overall site). The larynx, for instance, is broken down into five separate sites:
   - GA: glottis
   - GB: supraglottis
   - GC: subglottis
   - GD: laryngeal cartilage
   - GE: larynx NEC

### Tip

Don’t know whether the “true cord” mentioned in the documentation is included in anatomy site GA (glottis), GB (supraglottis) or (GC) subglottis?

Go to the top of the anatomy site group for GA, GB and GC and review the inclusion terms for a list of body sites included at that site;

Or

Check the list of body sites classified to a given anatomy site group in Folio Views Appendix A — CCI Code Structure, Groups: (G) Respiratory System:

- (GA) Glottis — Includes: intrinsic larynx, laryngeal commissure, true cord, true vocal cord, vocal cord NOS, vocal folds
- (GB) Supraglottis — Includes: epiglottic region, supraglottic region, extrinsic larynx, laryngeal aspect of aryepiglottic fold, ventricular band of larynx, false cord, false vocal cord, epiglottis NOS, vestibule of glottis
- (GC) Subglottis — Includes: subglottic region

ii) In contrast, some anatomy site groups are much broader. For example, in Section 2, a group may incorporate several anatomy sites because they are commonly examined together or a further breakdown is not clinically relevant. For example, there is just one anatomy site group for nerves of the hand in Section 2:

- 2.BP.^^.^^ Diagnostic Interventions on the Nerves of the Hand
  Includes: digital nerve NOS, median digital nerve

However, there are two groups for nerves of the hand in Section 1:

- 1.BP.^^.^^ Therapeutic Interventions on the Nerve(s) of the Hand
  Includes: nerves at palmar level, palmar median nerve
- 1.BQ.^^.^^ Therapeutic Interventions on the Digital Nerves of the Hand
  Includes: digital nerve NOS, median digital nerve, radial digital nerve

Overall, sections 2 and 3 have far fewer anatomy site groups than does Section 1.

iii) In other situations, a very precise location may or may not be clinically significant, and in this case further anatomical specificity is available only through a **location attribute**.

For example, 1.NK.^^.^^ *Therapeutic Interventions on the Small Intestine* includes the duodenum, jejunum and ileum. For most interventions performed on the small intestine, the particular part of the small intestine that is involved is not significant. However, at 1.NK.87.^^ *Excision partial, small intestine* it is. The duodenum is largely responsible for chemical (versus mechanical) digestion of food, whereas the jejunum and ileum are largely responsible for absorption of nutrients. It makes a difference to the patient which part(s) of the small intestine is removed. Therefore, at 1.NK.87.^^ there is a mandatory location attribute box with an option for duodenum (D Duodenum) and an option for a site other than duodenum (Z Other area of small intestine [e.g. jejunum, ileum, not otherwise specified]).

At the rubric for another type of intervention performed on the small intestine, namely 1.NK.80.^^ *Repair, small intestine*, there are the same values available for location specificity; however, applying the attribute is optional. It is not as important to distinguish between a repair of the duodenum and that of other parts of the small intestine, but the location attribute values are available for users to select based on their data collection needs.

## Combined sites

Various types of interventions impact or involve more than one site equally. When this occurs, a combined anatomy site group is available (e.g., FR Tonsils and Adenoids and RD Ovary with Fallopian Tube). Note, for example, that there are separate anatomy groups for ovary only (RB) and fallopian tube only (RF) for interventions performed on just one of these structures.

### Caution

It is important to take note of the specific wording in the group title when making a selection. For example, group FR Tonsils and Adenoids employs the term “and,” which is interpreted as and/or; that is, tonsils alone, adenoids alone or tonsils and adenoids together. On the other hand, RD Ovary with Fallopian Tube employs the term “with,” which is interpreted as ovary and fallopian tube together only.

## NEC and NOS

The terms “not elsewhere classified” (NEC) and “not otherwise specified” (NOS) used with anatomy site groups have the usual meaning that they do elsewhere in CCI.

Noteworthy is that an anatomy site group labelled “NEC” sometimes also includes sites that are not otherwise specified. For example, removal of foreign body of “eye” (site not otherwise specified) is assigned to 1.CZ.56.^^ *Removal of foreign body, eye NEC*. If the documentation is specific to “conjunctiva,” this is assigned to 1.CS.56.^^ *Removal of foreign body, conjunctiva*.

### Important note

It is expected that in most cases coders will be able to determine the (more) specific anatomy site from the documentation. When this is not possible, coders need to examine the available choices and make the best possible selection from the information that is available.

## Best fit (anatomy site not available)

When the intervention performed (e.g., removal of foreign body) is not available for the anatomy site on which it was performed (e.g., upper eyelid), the coder must make an educated decision as to where to best classify the intervention.

Using the example “removal of foreign body of upper eyelid,” take notice in the classification that there is no rubric for removal of foreign body in the anatomy site group for upper eyelid (1.CV.^^.^^ *Therapeutic Interventions on the Upper Eyelid*). Examining the list of anatomic groups for the Eye and Ocular Adnexa (C-) reveals that the only suitable choices available are CX Eyelid NEC and CZ Eye NEC. It makes good sense to place this at Eyelid NEC, which at least is specific to the eyelid.

### Key point

There are no hard and fast rules that cover all situations requiring a best fit. Some choices are more difficult than others. The best fit for the situation at hand *depends* on the situation. What is the setup of the specific anatomy site group in question? What exactly does the documentation state? Has an inclusion or alternate term been overlooked? Does the anatomy site involved clearly fit into one of the groups that are available but the specific anatomical term is not listed? What options are available at the given rubric and alternate rubrics? When in doubt, the best practice is to submit a coding question for assistance.

## Anatomy sites in particular

Some situations related to the selection of the correct anatomy site are more challenging than others. Details related to a number of unique circumstances associated with anatomy site selection are described in the following sections.

### Overlapping sites

Overlapping sites are anatomy sites that are contiguous (adjacent, next to one another). For example, the frontal and temporal lobes of the brain overlap, whereas the frontal and occipital lobes do not. Another example is the skin, which is one continuous organ; thus there are many overlapping sites within this organ (e.g., neck with face, hand with arm). A disease (e.g., malignant neoplasm) or injury can extend between, or involve, anatomy sites that are side by side.

To reduce the need to assign more than one code for sites that overlap, the classification provides for interventions that are performed on many overlapping anatomy sites. Provision for overlapping sites takes a number of forms:

- Overlapping sites may be included in a given anatomy site group;
- Exclusions may lead you to the proper code for the overlapping site; or
- Overlapping sites may be provided for in the location attributes.

And sometimes there is no need to provide special provision for overlapping sites, as there is only one anatomy site group for that organ/body part in CCI and thus overlapping sites would be assigned there.

When assigning codes to overlapping sites, careful attention must be paid to inclusions and exclusions; the meaning of the basic classification instructions and conventions must also be given due consideration.

## Key point

CCI contains provision for overlapping sites. Following the instructions in the classification and applying the basic classification rules thoughtfully will ensure that you arrive at the proper anatomy site group for the intervention performed on overlapping sites. See also Section 3.2: Deepest site and functional compromise.

**Example 1:** A patient had removal of a lesion that extended from the skin of the hand to the skin of the arm. At the rubric for partial excision, skin of hand, there is an inclusion that indicates that skin of hand with arm is included at this rubric.

**1.YU.87.^^ Excision partial, skin of hand**

Includes: Excision partial, skin of hand with overlapping or multiple sites of arm
Release [excision] scar contracture, hand
Resection, skin (lesion) of hand (with arm)

**Example 2:** A patient had partial removal of the stomach along with partial removal of the duodenum. At the rubrics for both partial excision, stomach (1.NF.87.^^) and partial excision, small intestine (1.NK.87.^^), there are exclusions that lead to the rubric for radical excision of the stomach (1.NF.91.^^) to be used when sites that overlap between these two organs are removed during the same intervention episode.

**1.NF.87.^^ Excision partial, stomach**

*Includes:* Antrectomy with vagotomy
Gastrectomy, partial (with or without splenectomy)
Polypectomy, stomach

*Excludes:* (Sleeve) gastrectomy for weight reduction (see 1.NF.78.^^)
Gastrectomy, subtotal with concomitant resection of adjacent organs (see 1.NF.91.^^)
Partial gastrectomy for repair of gastric diverticulum (see 1.NF.80.^^)
Proximal gastrectomy with esophagectomy (see 1.NA.91.^^)

**1.NK.87.^^ Excision partial, small intestine**

*Includes:* Diverticulectomy, Meckel's
Diverticulectomy, small intestine
Duodenectomy
Enterectomy NOS
Ileectomy
Jejunectomy
Polypectomy, small intestine
Repair, omphalomesenteric duct anomaly involving enterectomy
Resection of small intestine for removal of foreign body
Resection, subtotal, small intestine (with or without cecum involvement)

*Excludes:* Duodenectomy with gastrectomy (see 1.NF.91.^^)
Duodenectomy with pancreatectomy (see 1.OK.87.^^)
Enterectomy for repair of duodenal [or enteral] atresia (see 1.NK.80.^^)
Ileocecal resection (see 1.NM.87.^^)

**Example 3:** A patient had repair of the esophagus that overlapped the cervical (upper) and thoracic (middle) portions of the esophagus. Anatomy site group NA includes the **entire** esophagus; thus rubric 1.NA.80.^^ *Repair, esophagus* is used for repair of these overlapping sites.

**1.NA.^^.^^ Therapeutic Interventions on the Esophagus**

*Includes:* Anastomotic site of esophagus to stomach for continuity
Cardiac orifice, ostium, notch
Cardioesophageal junction
Esophagus [cervical, thoracic and abdominal]

**Example 4:** A patient had drainage of a brain abscess that involved overlapping lobes of the brain. At the rubric for drainage of brain (1.AN.52.^^), there is provision in the optional location attribute box for overlapping lobes of the brain.

**1.AN.52.^^ Drainage, brain**

Location Attribute:

F Frontal lobe
M Multiple (overlapping) lobes
O Occipital lobe
P Parietal lobe
T Temporal lobe
Z Other NEC (e.g. corpus callosum)

## Note

The rubric 1.AN.52.^^ includes overlapping lobes because all lobes of the brain are included in anatomy site group AN *Brain*. Users may, optionally, also select the location attribute M *Multiple (overlapping) lobes* if desired.

## Tip

All organs/body parts are capable of being broken down into smaller and smaller anatomical units. CCI employs a particular anatomical site breakdown (based on clinical relevance), but the documentation may make note of smaller anatomical units. The goal of the user is to fit the smaller units into the organization of CCI.

## Multiple sites

A disease or injury may also involve multiple anatomy sites within the same organ/body part that are not side by side — for example, multiple glass fragments embedded in non-contiguous sites of the skin of the leg. CCI employs similar strategies to provide for single-code assignment for many multiple anatomical sites as it does for overlapping sites.

**Example 1:** A patient had destruction of soft tissue of multiple non-contiguous sites of the foot and ankle. At the rubric for destruction of soft tissue of foot and ankle, there is an inclusion that indicates that multiple sites are included at this rubric.

While there is an inclusion for multiple sites at this rubric, this is really just a case of built-in redundancy. The anatomic group **WV** *Soft tissue of the foot and ankle* includes all soft tissue of the foot and/or ankle; thus multiple sites of soft tissue of the foot and ankle are included here, even without this inclusion. The exclusion at the group level (see below) pertains to the lower leg (versus foot and ankle).

**1.WV.59.^^ Destruction, soft tissue of the foot and ankle**

*Includes:*
Ablation, soft tissue [neoplasm] of foot
Debridement, amputation stump, foot and ankle
Debridement, extending into soft tissue (fascia, muscle or tendon) of foot and ankle
Destruction, multiple or overlapping sites of soft tissue (extending into fascia, muscle or tendon) of foot and ankle
Myoclasis, foot
Trimming, amputation stump, of foot and ankle

**1.WV.^^.^^ Therapeutic Interventions on Soft Tissue of the Foot and Ankle**

*Includes:* [Quadratus] plantaris
Abductor and adductor hallucis muscles
Abductor digiti muscle of foot
Extensor digitorum brevis muscle of foot
Interossei, intrinsic and extrinsic muscles of foot
Peroneus [longus, brevis, tertius] muscles
Plantar fascia
Soft tissue [neoplasm] arising in or extending into foot
Tibialis posterior, flexor digitorum longus, flexor hallucis longus muscles
Wound, soft tissue of foot and ankle

*Excludes:* Gastrocnemius and soleus muscles (see 1.VS.^^.^^)

**Example 2:** A patient had destruction of multiple non-contiguous nerves of the lower leg. Anatomy site group **BT** includes all of the nerves of the lower leg; thus rubric 1.BT.59.^^ *Destruction, nerve(s) of lower leg* is used for destruction of multiple sites within the lower leg, even though there is not an inclusion for multiple sites at 1.BT.59.^^.

**1.BT.^^.^^ Therapeutic Interventions on Nerve(s) of the Lower Leg**

Includes: Nerves at ankle
Nerves at knee
Peroneal nerve NEC
Saphenous nerve
Sciatic nerve at tibial level
Sural nerve
Tarsal tunnel
Tibial nerve NEC

**1.BT.59.^^ Destruction, nerve(s) of lower leg**

Includes: Lesioning of calcaneal nerve/branches

**Example 3:** A patient had destruction of lesions of the dome, posterior wall and trigone of the urinary bladder. At the rubric for destruction of bladder, there is provision in the optional location attribute box for multiple/contiguous sites of the bladder.

**1.PM.59.^^ Destruction, bladder**

Location Attribute:

| | |
|---|---|
| AN | Anterior wall |
| DM | Dome |
| LT | Lateral wall |
| M | Multiple/contiguous sites |
| PS | Posterior wall |
| TR | Trigone |
| U | Unspecified |
| UO | Ureteric orifice |
| UR | Urachus |

## Key point

Examine inclusion and exclusion terms carefully before assigning multiple codes to classify the same generic intervention performed on multiple sites.

## Caution

Where the classification does **not** provide for single-code assignment for the same generic intervention performed on multiple sites, separate codes are assigned.

For example, if, during the same intervention episode, a patient had laser destruction of both the optic lens and the retina, these interventions would be coded separately, as there are no inclusions, exclusions, instructions or conventions that tell you to do otherwise.

“Laser destruction of secondary membranous cataract with laser repair of retinal detachment” is classified to

1.CL.59.LA-AG Destruction, lens using open approach and laser

1.CN.59.LA-AG Destruction, retina using laser

## Deepest site and functional compromise

The concepts of deepest site and functional compromise are used by CCI to classify interventions for conditions that extend into other anatomy sites. The deepest site pertains to the innermost (situated farthest from the outside) site in the body that is being operated on. Functional compromise pertains to the loss of ability of an organ/body part to perform its specified purpose(s).

When a single intervention involves anatomy sites that fall to separate anatomy site groups, follow inclusion/exclusion terms carefully and consider the concepts of deepest site/functional compromise.

**Deepest site**

The selection of the anatomy site group to classify an intervention for a condition that extends into another anatomy site(s) may be based on the deepest anatomical site for which the intervention is performed. This site may be different than the site in which the condition originates.

**Functional compromise**

The selection of the anatomy site group to classify an intervention for a condition that extends into another(s) may be based on the anatomy site having the greatest functional compromise. The site of greatest functional compromise may be different from the site in which the condition originates.

**Example:** A patient had a resection of an intracranial lesion involving the cerebellum and the brain stem.

**1.AJ.87.^^ Excision partial, cerebellum**

*Includes:* Corticectomy, cerebellar
Debulking [neoplasm], cerebellum
Resection [neoplasm, cyst], cerebellum
Resection, posterior fossa [neoplasm], cerebellum

*Excludes:* Resection of posterior fossa neoplasm involving cerebellum but extending into 4th ventricle (see 1.AC.87.^^)
Resection of posterior fossa neoplasm involving cerebellum but extending into brain stem (see 1.AP.87.^^)
Resection of posterior fossa neoplasm involving cerebellum but extending into cerebellopontine angle (see 1.AK.87.^^)

*Code Also:* Any intraoperative stereotactic guidance (see 3.AN.94.^^)
Any robotic assisted telemanipulation of tools (see 7.SF.14.^^)

*Note:* Use this code for posterior fossa neoplasm arising in but not extending beyond the cerebellum. See exclusion notes to determine the most appropriate code when multiple sites are involved. (Use only one code to identify a posterior fossa resection. The order of precedence is: brain stem involvement, ventricle involvement, cerebellopontine angle involvement, cerebellum involvement.)

**Explanation:** Resection of an intracranial lesion that involves the cerebellum and the brain stem is classified to the anatomy group brain stem only (1.AP.87.^^ *Excision partial, brain stem*). Inclusions and exclusions at 1.AJ.87.^^ *Excision partial, cerebellum* help guide the way. A coding hierarchy within CCI has been established that considers the severity of the neurological defect and surgical complexity in order to determine the single most appropriate code for the type of resection.

### Further resources

See the coding standard *Hierarchy for Classification of Intracranial Lesion Resection* for additional details, including a flowchart that assists with code selection for resection of intracranial lesions.

## Space-occupying lesions

A space-occupying lesion can be defined as “a physical (has substance) lesion that takes up room.” The effect is more significant if the lesion is within a space confined by bone (e.g., brain). This is in contrast to a non-space-occupying lesion, one that does not take up room (e.g., a damaged nerve). When a space-occupying lesion extends from one anatomy site to another anatomy site, the concepts of deepest site and functional compromise are applied to the code selection.

See Section 3.2: Deepest site and functional compromise for details.

### Further resources

See the coding standard *Resection of Space-Occupying Lesions (Polyps) of Nose* for details regarding resection of polyps of the nose, including a flowchart for quick reference to how these are classified.

## Bones within joints

Sometimes an intervention is performed on the portion of a bone that forms a joint. When this is the case, a code is assigned for the anatomy site group of the applicable joint and not to the anatomy site group for the bone itself.

## Tip

The proximal end (upper end) (head) and distal end (lower end) of each bone has an articular surface where it forms a joint with the adjacent bone. Mention of "proximal" or "distal" end of a bone is a clue that this pertains to the articular surface of the joint and not the bone itself.

**Example 1:** Therapeutic interventions on the femur that involve the hip joint are assigned to therapeutic interventions on the hip joint (1.**VA**.^^.^^) and not to therapeutic interventions on the femur (1.**VC**.^^.^^), per the inclusions and exclusions at the applicable anatomy site group.

**1.VC.^^.^^ Therapeutic Interventions on the Femur**

*Includes:* Femur [epiphysis, periosteum]
Intertrochanter of femur
Pertrochanter of femur
Trochanter (greater and lesser) of femur

*Excludes:* Articular surface of distal femur (knee) (see 1.VG.^^.^^)
Articular surface of femur (hip) (see 1.VA.^^.^^)
Articular surface of proximal femur (hip) (see 1.VA.^^.^^)
Femoral condyle (medial, lateral) (see 1.VG.^^.^^)
Femoral epicondyle (medial, lateral) (see 1.VG.^^.^^)
Femoral head (see 1.VA.^^.^^)
Femoral tubercle (adductor) (see 1.VG.^^.^^)

**1.VA.^^.^^ Therapeutic Interventions on the Hip Joint**

*Includes:* Acetabulum with femoral head or neck and supporting joint structures (bursa, capsule, cartilage, labrum, synovium, ligament, ligamentum teres)
Hip joint NOS

*Excludes:* Acetabulum alone (see 1.SQ.^^.^^)
Hip joint with entire pelvis (see 1.SQ.^^.^^)
Sacroiliac joint (see 1.SI.^^.^^)
Trochanter of femur alone (see 1.VC.^^.^^)

**Example 2:** Fixation of fracture of the radius that involves the elbow joint is assigned to *Fixation, elbow joint* (1.TM.74) and not to *Fixation, radius and ulna* (1.TV.74), per the inclusions and exclusions at the applicable anatomy site group.

**1.TM.74.^^ Fixation, elbow joint**

*Includes:* Fixation, humeral condyle, capitulum, epicondyle, trochlea
Fixation, olecranon
Fixation, radial head and neck
Fixation, ulnar coronoid process and tubercle
Reduction with fixation, elbow joint

**1.TV.74.^^ Fixation, radius and ulna**

*Includes:* Debridement with fixation, radius and ulna
Epiphysiodesis, radius and ulna
Reduction with fixation, radius and ulna
that for non union repair, radius and ulna
that to arrest bone growth, radius and ulna (i.e. physeal arrest)
that with irrigation, open fracture wound, radius and ulna

*Excludes:* Fixation, radial head and neck or coronoid process of ulna (see 1.TM.74.^^)

## Further resources

See the coding standard *Joint Fracture Reduction, Fixation and Fusion* for additional details, including a flowchart that assists with code selection for interventions performed for joint fractures.

The diagrams in CCI for joints are also helpful in establishing the correct anatomy site group.

## Resection of margins

When excising the diseased portion of an organ/body part, the surgeon may remove a larger portion than required in order to ensure all the abnormal tissue was removed. If the expanded portion included overlaps another anatomical site, do not code the excision for two different anatomical sites, as it is not necessary to capture the code for the “margins” (normal tissue). The intent was to resect the entire diseased portion of a particular organ/body part, and only the one anatomical site is captured.

## Aberrant (ectopic) tissue

Aberrant (also known as ectopic) tissue is normal tissue associated with a given organ/body part found in an abnormal location (i.e., at a distance from the site of origin). An example is adrenal tissue found at a distance from the adrenal gland.

Removal of aberrant tissue is classified to the anatomy site of origin (e.g., 1.PB.87.^^ *Excision partial, adrenal gland*). A location attribute indicating the tissue is aberrant — **AT** *Aberrant tissue only* — is available to accompany the intervention code.

### Further resources

For additional details and another example, see the coding standard *Destruction or Excision of Aberrant/Ectopic Tissue*.

## Fistulas, bypasses and shunts

Fistulas, bypasses and shunts are all entities that go between one organ/body part and another organ/body part; therefore, they, and their similar code assignment, are discussed together in this section.

#### Descriptions

A **fistula** is a **medical condition** where a passageway has formed either between two internal organs/body parts (internal fistula) or between an internal organ/body part and the surface of the skin (external fistula).

An example of an **internal fistula** is a colovesical fistula — there is a passageway from the colon to the bladder, although these two sites do not normally communicate with one another. An internal fistula usually has a compound term associated with it, for example, oroantral fistula (between the oral cavity and the maxillary sinus) and colovesical fistula (between the colon and the bladder, as above).

An example of an **external fistula** is a branchial fistula — there is a passageway from the outside of the side of the neck to the pharynx; in normal anatomy this tract does not exist. An external fistula may be referred to as a cutaneous fistula because it exits through the skin to reach the surface of the body. An external fistula often has a single anatomical term associated with it, for example, anal fistula (between anal canal and skin) and branchial fistula (most often between the pharynx and the skin at the side of the neck, as above). Or an external fistula may use a combining form, such as nephrocutaneous and vesicocutaneous.

The terms “simple fistula” and “complex fistula” are also used to describe a fistula. **Simple fistulas** are sometimes described as “easy to identify” or “small” or by their anatomical level — low-level, mid-level (versus high-level) — or as “cutaneous fistulas” that go between an organ/body part and the skin. **Complex fistulas** are sometimes described as having “more than one fistulous tract” or by their etiology — for example, caused by infection/inflammatory disease, cancer or radiation — or are “large” or are those that have had prior multiple “failed repair.” The type of intervention used to repair a fistula depends in part on whether it is a simple or complex fistula.

A **bypass** and **shunt**, on the other hand, are **surgically created fistulas** where an alternate (or additional) passageway is fashioned through which body fluids, excretions, etc. are diverted from their normal path by surgical reconstruction or by a synthetic tube. An example of a *bypass* is an atriopulmonary bypass, where the flow of blood is diverted from the entrance of the right atrium directly to the pulmonary arteries (avoiding the right atrium and right ventricle). An example of a *shunt* is a ventriculoperitoneal (VP) shunt, whereby small tubing is placed inside the ventricle of the brain and tunnelled underneath the skin to the peritoneum, where cerebral spinal fluid is then drained from the brain to the peritoneal cavity.

**Code assignment**

**i)** External fistula

The closure of an external fistula is always classified to the internal site only. For example, closure of nephrocutaneous fistula is classified to *closure of fistula, kidney*.

**ii)** Bypass, shunt, complex fistula

The setup of codes in CCI used to capture bypasses, shunts and interventions to repair more complex fistulas is based on an originating/terminating site principle that employs two components of the CCI code:

1. The **anatomy site group** reflects the originating site (where the fistula arose, the blockage is bypassed or the shunt is inserted) (e.g., **NM** *Large intestine* for fistula originating in the colon); and
2. The **qualifier 1** (approach/technique) reflects the terminating site (where the fistula ends, the bypass stops or the shunt drains into) (e.g., **MR** *for fistula terminating in urinary tract*).

The classification has designated just one anatomy site group for the classification of a given fistula, bypass or shunt, which always goes between two anatomical sites. One basis of the designated anatomy site group involves the concept of *functional compromise* (which site most affects the patient).

## Caution

The originating/terminating site principle describes the basic setup of these codes. There are additional considerations to the code assignment, especially for fistulas; these are illustrated in the examples that follow.

**Example 1:** Intervention performed: “Closure of tracheoesophageal fistula”

Entering “closure tracheoesophageal fistula” (or abbreviated variations such as “closure tracheoesophageal” or “tracheoesophageal fistula”) in the advanced query dialogue box leads to the rubric for closure of fistula, trachea.

**Explanation:** At 1.GJ.86.^^ *Closure of fistula, trachea*, there are two choices of qualifier 1 for the terminating site — **ME** for fistula terminating at esophagus (e.g., tracheoesophageal) and **MB** for fistula terminating at skin. For this case, select ME and then complete the code by selecting the approach and the means whereby the fistula was closed: with simple apposition, with simple apposition and fibrin (glue), using autograft, using local flap (e.g., strap muscle). If an open approach using an autograft was how the closure of the fistula was achieved, the completed code is the following:

1.GJ.86.ME-XX-A Closure of fistula, trachea open approach for fistula terminating at esophagus [e.g. tracheoesophageal] using autograft

For this case, the qualifier **ME** was selected because of the description of the fistula — tracheoesophageal fistula. The anatomy site group **GJ** identifies the originating site (trachea) and the qualifier ME identifies the terminating site (esophagus). The qualifier MB *for fistula terminating at skin* is not selected because this fistula terminates at the esophagus and not the skin. The term “tracheal fistula” would likely be how a fistula originating in the trachea and terminating in the skin would be documented. Take note that both terms “esophagotracheal” and “tracheoesophageal” are included at this rubric. Both a fistula that originates in the trachea and terminates in the esophagus and a fistula that originates in the esophagus and terminates in the trachea are included in this rubric. For purposes of code assignment it does not matter where the start and end points are or even if this detail is (un)known (clinically or otherwise). CCI has classified both to the rubric for trachea (1.GJ.86.^^ *Closure of fistula, trachea*) and not to the rubric for esophagus (1.NA.86.^^ *Closure of fistula, esophagus*). The coder just goes with the flow of CCI and assigns GJ as the originating site (whether it is or not) and ME as the terminating site (whether it is or not).

## Key point

The terms used to describe a fistula can be switched around (reversed) but still have the same meaning. For example, either "esophagotracheal fistula" or "tracheoesophageal fistula" means that the fistula occurs **between** these two body parts. The repair of both esophagotracheal fistula and tracheoesophageal fistula are classified to 1.GJ.86.^^ *Closure of fistula, trachea*. Another example is vulvorectal fistula and rectovulvar fistula: both mean that the fistula occurs **between** these two body parts. The repair of both vulvorectal fistula and rectovulvar fistula are classified to 1.NQ.86.^^ *Closure of fistula, rectum*. CCI often has both terms included in the classification (tabular list and/or alphabetical index) to help guide the code assignment.

**Example 2:** Intervention performed: "Closure of vaginovesical fistula open approach using pedicled flap closure"

Entering "closure vaginovesical fistula" or "vagino vesical" results in no hits using the Advanced Query function. However, there are several other variations that do lead to the code of choice. These include "vaginal vesical" *and* "vesico vaginal." Using these terms leads you to 1.PM.86.^^ *Closure of fistula, bladder*.

**Explanation:** The repair was accomplished by open approach using pedicled flap closure; therefore, the correct code is

1.PM.86.MH-XX-G Closure of fistula, bladder fistula terminating in genital tract open approach pedicled flap closure

Although **vaginovesical** fistula is not noted at 1.PM.86.^^, the repair of a fistula that occurs **between** the vagina and the bladder is assigned to this rubric. For purposes of code assignment, it does not matter where the start and end points are or even if this detail is (un)known (clinically or otherwise). CCI has classified both a fistula that originates in the vagina and terminates in the bladder and a fistula that originates in the bladder and terminates in the vagina to the rubric for bladder (1.PM.86.^^ *Closure of fistula, bladder*) and not to the rubric for vagina (1.RS.86.^^ *Closure of fistula, vagina*). The coder follows CCI instruction and assigns PM as the originating site (whether it is or not) and MH as the terminating site (whether it is or not).

## Key point

CCI includes some but not all variations on the terms and punctuation used for fistulas. The goal is to search using alternate terms and punctuation to locate the term/punctuation that the classification has included. Another example of this is colovesical or vesicocolic fistula — the classification uses "intestinovesical" for these. Closure of intestinovesical fistula is classified to 1.NP.86.^^ *Closure of fistula, small and large intestine*. Note that both fistulas from/to the small intestine and from/to the large intestine are classified to the same rubric.

**Example 3:** Intervention performed: "Closure of corneal fistula"

**1.CC.80.^^ Repair, cornea**

*Includes:*
Closure, corneal or corneoscleral fistula
Repair, corneal or corneoscleral fistula
Repair, corneal wound dehiscence (post cataract)
Repair, traumatic wound with involvement of cornea (and sclera)
Repositioning, prolapsed iris
Suture, macro perforation of cornea
that for detachment of Descemet's membrane
that with excision or closure of filtering bleb
that with or without restoration of anterior chamber by injection of air or saline
that with overlap into sclera
that with placement of compression sutures

*Excludes:*
Closure or revision of filtering bleb (post-glaucoma surgery) alone (see 1.CS.80.^^)
Endothelial keratoplasty (see 1.CC.85.^^)
Needling, cornea (see 1.CC.09.^^)
Penetrating keratoplasty (see 1.CC.85.^^)
Refractive keratoplasty (see 1.CC.84.^^)
Repair of filtering bleb with corneal transplant (see 1.CC.85.^^)

| | |
|---|---|
| 1.CC.80.LA | using simple closure [suture] |
| 1.CC.80.LA-W4 | using glue |
| 1.CC.80.LA-XX-A | using autograft [e.g. conjunctival flap] |
| 1.CC.80.LA-XX-K | using homograft [e.g. "blow-out" patch, amniotic membrane transplant (AMT) or graft] |
| 1.CC.80.LA-XX-Q | using combined sources of tissue |

**Explanation:** Closure of corneal fistula is classified to 1.CC.80.^^ *Repair, cornea*, where closure corneal fistula and repair corneal fistula are inclusions. What is noteworthy in this example is that the generic intervention *closure fistula* is included in the *repair* rubric (1.CC.**80**.^^). What is also worth noting is that the available code options are not as complex as for other sites involved in a fistula.

### Tip

The alphabetical index has an extensive listing under the lead term **Closure***,* subterm **fistula**. There are also cross-references for other index lookups.

**Closure (see also** Repair, by site**)**

– fistula (see also Repair, fistula, by site)

– – abdomino uterine 1.NP.86.^^

– – alveolar ridge, maxillary 1.EM.86.^^

– – anorectal 1.NQ.86.^^

– – anovaginal 1.NQ.86.^^

– – anus 1.NT.86.^^

. . . etc.

**Repair (with or without replacement grafts or flaps)**

– fistula (see also Closure of fistula, by site or type)

– – alveolar ridge, maxillary 1.EM.86.^^

– – aorto bronchial 1.ID.86.^^

– – aorto duodenal 1.ID.86.^^

– – aorto enteric 1.ID.86.^^

. . . etc.

## Surgically constructed sites/anastomosis sites

CCI has special anatomy site groups for surgically constructed tracts in the digestive and urinary systems:

- **(OW) Surgically constructed sites in digestive and biliary tract**
  Includes: gastric pouch, pelvic pouch, ileal reservoir, Kock pouch, roux en y limb [of anastomosis], esophagostomy, gastrostomy, duodenostomy, jejunostomy, ileostomy, enterostomy, colostomy, neoesophagus, neopharynx, neorectum

- **(PV) Surgically constructed urinary tract**
  Includes: pyelostomy tract, nephrostomy tract, ureterostomy tract, cystostomy tract, urethrostomy tract, ileoconduit

A **surgically constructed site** of the gastrointestinal or urinary system is one where the normal anatomy of the tract has been reconfigured and the usual flow of substances within the tract is rerouted via bypass, diversion or creation of a stoma. Interpositional intestinal flaps and construction of pouches to replace excised structures, such as the esophagus, bladder and rectum, are also considered surgically constructed sites.

Examples of surgically constructed sites include the following:

- Gastric bypass (Roux-en-Y, biliopancreatic diversion, duodenal switch)
- Urinary diversion (using ileal conduit)
- Esophagectomy with interpositional intestinal flap
- Stomal tracts
- Ileal reservoir (Kock pouch, ileoanal pouch, J-pouch, S-pouch)
- Neorectum, neobladder

## Key point

Anatomy site groups OW and PV are selected when the intervention is being performed to assess or treat a **surgically constructed site**. This includes the anastomosis at a surgically constructed site and a stomal tract. However, note that anatomy site groups OW and PV exclude the externalized opening at the skin surface of a stoma. When an intervention such as debridement or repair is performed at the skin surface only (external stoma), then the correct anatomy site group is YY *Skin of Surgically Constructed Sites.* Note also that anatomy site groups OW and PV do not include anastomosis following partial resection and rejoining.

## Important note

Partial resection of a segment of the gastrointestinal or urinary tract with simple rejoining of the ends without reconfiguring the tract (i.e., bypassing, diverting, constructing a new rectum or bladder or replacing the lost segment with an interpositional graft) is **not** considered a surgically constructed site.

When an intervention is performed at a gastrointestinal anastomosis that is not that of a surgically constructed site, use the following guide to select the appropriate anatomy site group:

| Type of anastomosis | CCI anatomy site group |
|---|---|
| **Esophagus to stomach** | NA Esophagus |
| **Stomach to small intestine** | NK Small Intestine |
| **Small intestine to small intestine** | NK Small Intestine or NP Small and Large Intestine |
| **Small intestine to large intestine** | NM Large Intestine or NP Small and Large Intestine |
| **Small intestine to rectum** | NQ Rectum |
| **Large intestine to rectum** | NQ Rectum |
| **Rectum to anus** | NQ Rectum |

### Inspection of a stoma versus inspection through a stoma

When an intervention, such as inspection, is performed on the **tract of a stoma**, the correct anatomy site group is OW or PV; however, if the stoma is simply used as the portal for entry to inspect, for example, the large intestine, then the correct anatomy site group is NM *Large intestine*.

## Important note

For interventions performed on anatomy site group OW *Surgically constructed sites in digestive and biliary tract,* it is not necessary to capture 2.NM.70.^^ *Inspection, large intestine* as an additional code to distinguish between a colonoscopy and sigmoidoscopy.

### Subcutaneous pockets

Anatomy site group YY *Skin of surgically constructed sites* also includes the concept of subcutaneous pockets. If the intervention is being performed at the site of a subcutaneous pocket alone, then the correct anatomy site group is YY. For example, replacement of a cardiac pacemaker battery/pulse generator is captured within block 1.YY.^^ *Therapeutic Interventions on Skin of Surgically Constructed Sites* rather than at 1.HZ.^^.^^ *Therapeutic Interventions on the Heart NEC*.

### Tip

Replacement of the generator and its batteries go hand in hand. The generator and its batteries are both replaced, even if it is called a “battery change.” Because the battery is sealed inside the pacemaker generator, replacing the battery requires that the entire generator be replaced.

## Knowledge checks

Complete the following knowledge checks and then review the answers in Appendix A. If you answered any questions incorrectly, it is recommended you go back and review the relevant information within this section.

**Question 1**

Choose T for true or F for false for the following statement:

**T** **F** The exact same anatomy site groups are available in all rubrics in sections 1, 2 and 3 of CCI.

**Question 2**

Choose T for true or F for false for the following statement:

**T** **F** When the same generic intervention (e.g., excision lesion) is performed on different anatomy sites, a separate intervention code must always be assigned for each of the anatomy sites involved.

**Question 3**

Choose T for true or F for false for the following statement:

**T** **F** Closure of an esophagealcutaneous fistula is classified to closure of fistula of esophagus, not closure of fistula of skin.

**Question 4**

Choose T for true or F for false for the statement that follows the clinical scenario:

Scenario: A patient had a reduction of a fracture of the radius.

**T** **F** The reduction of the fracture of the radius is classified to the rubric 1.TV.73.^^ *Reduction, radius and ulna*.

**Question 5**

Choose T for true or F for false for the statement that follows the clinical scenario:

Scenario: The intervention that you are coding is “Resection of osteosarcoma left shaft of femur.”

**T** **F** The resection of the shaft of the femur is classified to the anatomy site group **VA** *Hip joint*.

**Question 6**

Choose the one correct answer:

Ectopic thyroid tissue removed from the back of the tongue is classified to

1.FJ.87.^^ Excision partial, tongue

1.FU.87.^^ Excision partial, thyroid gland

**Question 7**

Choose the one correct answer:

A patient underwent dilation of a stricture of his permanent colostomy tract. The correct anatomy site group for this intervention is

**NM** Large intestine

**OW** Surgically constructed sites in digestive and biliary tract

**YY** Skin of surgically constructed sites

# Section 3.3: Field 3 — Intervention

## Introduction

Within each group (e.g., anatomy site group) in CCI, there are rubrics available for types of interventions that are performed on those groupings. This component of the code identifies **what** intervention was performed, for example, a computerized tomography scan (on the brain) or an induction of labour (during the antepartum stage of pregnancy). Field 3 always represents generic types of health care actions. The type of intervention makes up the third field (fourth and fifth characters) of the CCI code and consists of a two-digit numerical value. For example:

1.YG.**80**.JA-XX-P  Repair, skin of neck using cultured tissue

For the purposes of this guide, this section focuses on therapeutic interventions (interventions within Section 1 — Physical/Physiological Therapeutic Interventions).

### Note

While the generic type of intervention performed is the third field of the CCI code, the intervention itself (e.g., “amputation” or “repair”) is the pivotal component of the code. That is, the intervention is the component of the code to which all other fields relate. The coder becomes aware from the documentation that an intervention has taken place and then begins to gather information about that intervention to arrive at the appropriate code.

## Determining which interventions to code

Most CCI users will not assign codes from the full range of intervention codes available in CCI. For efficient coding practices, coders need to know which of the interventions for which there is a CCI code that are documented in the clinical record they are required to capture. Establishing which interventions in CCI are mandatory (or optional) for collection is based primarily on the coding standards and facility requirements.

# Generic intent (generic interventions)

## Overview

The intervention field of the CCI code is a two-digit numerical value that describes **what** was performed. CCI categorizes health care interventions according to the **generic type of action** performed. This results in a range or class of similar interventions being grouped together under a single “generic intervention” group that is given a two-digit numerical value. For example, similar treatment actions such as shunting (shunts), grafting (grafts) and anastomosing (anastomosis) that are performed to alter the route of passage of body fluids, gases, excretions, etc. in or between body parts are categorized to the generic intervention Bypass (76).

The available generic interventions in each section of CCI are intended to be **clearly distinguishable** from each other by their title and their description — for example, generic interventions Counselling (10) and Training (50) in Section 6. Counselling pertains to “providing health advice” and Training pertains to “teaching new or different skills.”

## Intervention definitions

Familiarity with the titles and definitions for generic interventions is key to the successful application and use of CCI. This facilitates zeroing in on the most appropriate search terms to use to locate a code and making the proper selection between one intervention group and another for a given intervention.

### Further resources

Appendix A — CCI Code Structure, Intervention Definitions lists all of the generic interventions for each section of CCI, along with definitions and examples to illustrate their use. For example:

**Bypass** (76) Altering a route of passage for body fluids, tissue, gases, impulses and excretions in, or between, body sites. Excludes that done to drain a body part (e.g., ventriculoperitoneal shunt)

- Systemic-to-pulmonary shunt
- Coronary artery bypass graft
- Cholecystojejunostomy

## Establishing intent

*Establishing intent* pertains to matching up what you see described in the documentation to what was done as it relates to the generic interventions that are used in CCI. Whoever has documented the intervention is not thinking of the coding function or the reporting function when they record. They are describing the intervention in clinical, not data collection, terms. Establishing the intent of the intervention assists the coding function.

To translate the description into CCI terms, ask yourself, "What is the **plan or purpose** of the intervention being performed? What is the overall **intention** of the intervention being performed? What is the final desired **outcome or result**?" For example, when a patient is receiving treatment for a neoplasm, the intent may be to remove or destroy the lesion, and these interventions would be found under *Excision — partial, total or radical* or *Destruction*. When there is a fracture, the intent may be to simply put the bone back in its original position and let it heal on its own — *Reduce* — or to put the bone back in its original position and surgically maintain it in that position — *Fixation*. A patient with hydrocephalus may have a ventriculoperitoneal shunt inserted to facilitate *Drainage* of the ventricles of the brain.

There may be times when the intent is not as obvious; when this occurs, some detective work is necessary.

**Example:** From the operative report of a patient with a traumatic lower leg wound: "the fascia was imbricated in a vest-over-pants technique"

Some actions that can be taken to establish intent and locate the proper code for "imbricate" are the following:

- Look up the meaning of "imbricate." (It means to overlap like roof tiles.)
- Look up the meaning of the phrase "vest-over-pants." (It is a suture pattern whereby tissues to be sutured are overlapped in a side-over-side fashion instead of meeting end to end; interrupted sutures pass through both layers at both edges.)
- Do a search in Folio Views on the term "imbricate." (There are no hits for "imbricate," but using a wild card [imbricat*] or checking the word wheel at top left of the dialogue box as you enter the term uncovers the term "imbrication." Moving through the partition hits for imbrication demonstrates that five out of six hits lead to *Repair*.)
- Do a search in Folio Views on "vest-over-pants." (The two hits lead to *Repair* of muscles but not of anatomy site lower leg.)
- Review the available interventions and their descriptions in Appendix A. (You can pretty quickly rule out generic interventions like Acupuncture, Control of Bleeding, Implantation of internal device by their title). A quick review of the definitions for those that have potential (e.g., Destruction, Incision) will narrow the possibilities. Here you find that the definition of *Repair* is "restoring a body part by encouraging regeneration (of tissue) or by surgical apposition."

You now have a few terms that you can search on; not all are actual generic interventions, but they may be inclusions at the generic intervention for the code that you want to locate. The lead search terms from this detective work include “repair,” “suture” and “fasciorrhaphy.” Add your secondary terms and search and locate the code. For example, the search “suture fascia lower leg” takes you to the proper code: 1.VR.80.LA *Repair, muscles of lower leg [around knee] using open approach and apposition [suture, staple]*.

### Tip

Sometimes the consent form will provide a clue to the intent of the intervention. For example, if the “operation performed” reads “Halsted procedure,” looking at the consent form may reveal “Repair hernia” as the intervention to which the patient is consenting. You can also imagine yourself sitting in the physician’s office while he or she discusses the procedure that will be done with you. The physician might say, “My intention is to . . .” or “The result that we are after is . . .”

## Differences between certain generic interventions

While the generic interventions in each section of CCI are intended to be clearly distinguishable from each other by their title and their description, sometimes this is easier said than done. This section discusses a number of challenges pertaining to discerning between generic interventions.

### Drainage (52) versus dilation (50)

*Drainage* (52) involves the removal of fluid such as water, blood or pus from a wound or part of the body to the outside of the body, usually by means of a tube. *Dilation* (50) involves the restoring of patency (i.e., open/unblocked state) of a body part to re-establish the normal flow of bodily fluids within the body.

For example, the rubric 1.PE.50.^^ *Dilation, renal pelvis* includes interventions such as insertion of stent or balloon dilation whose intent is to re-establish the internal flow of urine through the renal pelvis into the bladder. On the other hand, 1.PE.52.^^ *Drainage, renal pelvis* includes interventions such as insertion of pyelostomy tube, whose intent is to divert (redirect) the flow of urine from the renal pelvis to outside of the body.

## Note

Sometimes dilation and drainage go hand in hand; the primary intent is to dilate, and (temporary) drainage is also provided. For example, at rubric 1.PV.52.^^ *Drainage, surgically constructed urinary tract* there is the following exclusion: Excludes: that with concomitant insertion of stent into stoma (see 1.PV.50.^^). When both dilation and drainage occur, a code from 1.PV.50.^^ *Dilation, surgically constructed urinary tract* is selected, which includes both.

## Repair, by decreasing size (78) versus excision, partial (87)

The basic difference between these two generic interventions is the end result they set out to achieve (their intent!). *Repair, by decreasing size* (78) involves the resection of tissue (often normal tissue) with the intent to correct a related problem or improve appearance; the removal of the tissue is but the means to an end — it is completed to accomplish something else. On the other hand, *Excision, partial* (87) is the removal of diseased tissue; the taking out of the diseased tissue is the desired final end result.

For example, the rubric 1.CX.78.^^ *Repair by decreasing size, eyelid NEC* includes blepharoplasty that removes excess (baggy, saggy) normal tissue (usually age-related) from the upper and/or lower eyelid to improve appearance. And the rubric 1.GT.78.^^ *Repair by decreasing size, lung NEC* includes lung volume reduction, which is a surgical treatment for patients with advanced emphysema in which part of the emphysematous lung is removed to allow the remaining tissue to expand more fully and restore some of the patient's breathing capacity. In contrast, rubric 1.CX.87.^^ *Excision partial, eyelid NEC* includes excision of chalazion (cyst of eyelid), which is performed solely to remove the diseased tissue.

## Caution

Do not confuse the term "reduction" used with some interventions that repair by decreasing size (e.g., *reduction gastroplasty* to promote weight loss) with the generic intervention *Reduction* (73), which is used for interventions that restore a body part to its original position (e.g., reduction of fracture).

## Excisions: Partial (87) versus total (89) versus radical (91)

The concept of excision is described by many different terms in medical terminology. CCI users must be guided by the generic definitions provided to determine what type of excision is taking place. Basically, an *Excision, partial* (87) is selected when any **portion** of an organ or body part is removed; *Excision, total* (89) is selected when the **entire** organ or body part is removed; and *Excision, radical* (91) is selected when a portion or the entire (usually) organ or body part **and adjacent tissue** is removed. Adjacent tissue pertains to structures from another body system.

### Radical excisions

The concept of "radical" excision has been included in CCI only where it is clinically supported. Notes have been added at radical excision rubrics that detail the type of adjacent tissue that is typically removed. Excision of some or all of the tissues noted (+/– additional nearby tissue) constitutes a radical excision.

### Note

Concomitant regional lymph node dissection may or may not be included in the radical excision code. Coders must be guided by the inclusions, notes and "code also" instructions at the rubric.

**Example:** At 1.PC.91.^^ *Excision radical, kidney*, there is a note that reads, "Involves removal of kidney, adrenal gland, renal artery, renal vein and all perinephric tissue in Gerota's fascia." There is also an instruction that reads, "Code Also: Any excision of lymph nodes (see 1.MH.89.^^)."

**Scenario:** A patient had an "open radical nephrectomy" with sparing of the adrenal gland. There is no mention in the operative report of any lymph node removal. All of the adjacent tissues identified in the note were removed except the adrenal gland. That the adrenal gland was not removed does not preclude the use of a code for radical excision, kidney for this case. And as there was no lymph node excision, an additional code for this is not required.

### Key point

A radical excision does not always have to include **all** of the adjacent tissues that are mentioned in the note. Interventions described as modified radical are examples of excisions that are classified to a rubric for radical excision even when some organs or tissues are spared. Also, a radical excision does not necessarily mean that the entire (total) organ or body part was removed. Sometimes there may be an extensive partial excision that includes adjacent body structures and a complex repair of a wide surgical defect. The generic intervention *Excision, radical* is often used for definitive surgical treatment of large malignant neoplasms.

**"Completionectomies"**

When an organ or body part has been previously resected and the patient presents for excision of the remainder of that organ or body part, it is now classified as a total excision. The rationale behind this is that the outcome is complete removal of that organ or body part. The complete loss of an organ or body part may have different functional outcomes than the preservation of a portion of it.

**Example:** A patient who had previously had a quadrant resection of the breast returns for removal of the remainder of the breast. The removal of the remainder of the breast is captured by a code from rubric 1.YM.89.^^ *Excision total, breast*.

# Multiple intervention codes

CCI is designed to reduce the number of codes required to adequately capture intervention data. To accomplish this, there are many composite codes where two or more potentially stand-alone interventions are built into one code because they are typically performed at the same time. There are some circumstances, however, where multiple codes can and should be used and circumstances where an additional code clearly should not be used.

## When multiple intervention codes are assigned

During the same intervention episode, multiple CCI codes are assigned in the following circumstances:

**a) Multiple generic interventions within an anatomical group**

When different generic interventions are performed on different sites within the same anatomical group, multiple codes are assigned.

**Example:** Extraction foreign body skin of toe and suture laceration skin of foot

| | |
|---|---|
| 1.YW.80.LA | Repair, skin of foot using apposition technique [suture] |
| 1.YW.56.LA | Removal of foreign body, skin of foot using incisional approach |

**Explanation:** Skin of toe and skin of foot are separate anatomical sites classified to the same anatomical group (YW). The generic interventions performed differ — removal of foreign body (56) and repair (80); therefore, both generic interventions are captured.

**b) Interventions involving different anatomical groups**

When the same generic intervention is performed on sites within different anatomical groups, multiple codes are assigned.

**Example:** Suture laceration skin of foot and skin of arm

1.YW.80.LA Repair, skin of foot using apposition technique [suture]

1.YT.80.LA Repair, skin of arm using apposition technique [suture]

**Explanation:** The generic intervention repair (80) remains the same for all anatomical sites. However, skin of foot is included in anatomical group YW and skin of arm is included in anatomical group YT; therefore, repair is captured for both sites.

## Note

When an intervention of the same type is performed concomitantly on another site, a "code also" instruction may be provided. For example:

1.OJ.87.LA Excision partial, pancreas using open approach

*Code Also:* Any concomitant resection of large intestine [e.g. splenic flexure] (see 1.NM.87.^^)

**c) Different generic interventions and different anatomical groups**

When different generic interventions are performed on sites within different anatomical groups, multiple codes are assigned.

**Example:** Suture laceration skin of foot and closed reduction fracture of humerus

1.YW.80.LA Repair, skin of foot using apposition technique [suture]

1.TK.73.JA Reduction, humerus using closed [external] approach

**Explanation:** Two different generic interventions — repair (80) and reduction (73) — were performed at sites within different anatomical groups — skin of foot (YW) and humerus (TK); therefore, multiple codes are assigned.

## Note

When an additional intervention is performed concomitantly on another site, a "code also" instruction may be provided. For example:

1.OT.13.LA-NP Control of bleeding, abdominal cavity using open approach and leaving packing in situ

*Code Also:* Any temporary closure of abdomen to facilitate subsequent removal of packing (see 1.SY.80.^^)

**d) A component of the CCI code is different for interventions performed on bilateral sites**

When the same generic intervention is performed on bilateral sites and there is a variation in any component of the CCI code, multiple codes are assigned (unilateral location attributes mandatory when available). When the exact same generic intervention is performed on bilateral sites, a single code is assigned (bilateral location attribute mandatory when available).

**Example 1:** Closed reduction fracture of right humerus and open reduction with screw fixation left humerus

1.TK.74.LA-NW Fixation, humerus open approach no tissue used using plate, screw
Location attribute: L Left [shaft or NOS] optional

1.TK.73.JA Reduction, humerus using closed [external] approach
Location attribute: R Right optional

**Explanation:** Two different generic interventions — reduction (73) and fixation (74) — were performed at the bilateral sites of the left humerus and right humerus; therefore, multiple codes are assigned. The location attribute is optional because these are different generic interventions — assign L for left and R for right optionally.

**Example 2:** Closed reduction fracture of right humerus and open reduction fracture of left humerus

1.TK.73.JA Reduction, humerus using closed [external] approach
Location attribute: R Right mandatory

1.TK.73.LA Reduction, humerus using open approach
Location attribute: L Left mandatory

**Explanation:** The same generic intervention — reduction (73) — was performed on the left and right humerus, but the approach has changed; therefore, multiple codes are assigned. The mandatory location attribute describes the specific reduction intervention performed on each side and identifies that the reductions were performed differently for each side.

**Example 3:** Closed reduction fracture of right humerus and closed reduction fracture of left humerus

1.TK.73.JA Reduction, humerus using closed [external] approach Location attribute: B Bilateral mandatory

**Explanation:** The exact same generic intervention (reduction humerus using closed approach) was performed on the left and right humerus; therefore, a single code is assigned. The mandatory location attribute identifies that the described reduction was performed bilaterally.

**e) A rubric contains a variety of interventions within the generic intervention grouping**

A few rubrics contain a number of different interventions within the same rubric. When more than one type of intervention within these rubrics is performed, multiple codes are assigned.

**Example 4:** Patient had both an esophagogastroduodenoscopy (EGD) (via oral cavity) and ileoscopy (via rectum)

2.NK.70.BA-BL Inspection, small intestine using endoscopic per orifice approach (or via stoma) and gastroscope

2.NK.70.BD-BK Inspection, small intestine using retrograde (via rectum) endoscopic per orifice approach and (double) balloon enteroscope

**Explanation:** Two different interventions — EGD (from above) and ileoscopy (from below) — were performed. Both of these interventions are included in rubric 2.NK.70.^^ *Inspection, small intestine*; therefore, multiple codes are assigned.

**f) A rubric contains a "code all that apply" note**

Another circumstance when assigning multiple codes within the same rubric is acceptable is when an instruction to "code all that apply" is provided at the rubric level. Where this instruction appears, multiple codes from that rubric may be selected. See Section 2.1: Code all that apply for additional details.

## When multiple intervention codes are not assigned

During the same intervention episode, multiple interventions are not coded if

- A composite code for the interventions and/or anatomical sites exists;
- An "omit code" instruction is present;
- Two or more techniques, devices, agents or tissue are used for a single intervention; and
- The exact same intervention is performed on bilateral sites.

# Knowledge checks

Complete the following knowledge checks and then review the answers in Appendix A. If you answered any questions incorrectly, it is recommended you go back and review the relevant information within this section.

### Question 1

Choose T for true or F for false for the following statement:

**T** **F** Establishing the intent of the intervention assists the coding function by making it easier to match up what is described in the documentation to what procedure was performed as it relates to the generic interventions that are used in CCI.

### Question 2

Choose T for true or F for false for the following statement:

**T** **F** The generic intervention *Drainage* (52) involves restoring of patency of a body part to re-establish the normal flow of bodily fluids **within the body**, whereas, the generic intervention *Dilation* (50) involves removing fluid from a wound or part of the body to the **outside of the body**.

### Question 3

Choose T for true or F for false for the statement that follows the clinical scenario:

Scenario: A patient had bilateral inguinal hernias repaired at the same intervention episode. Both were repaired laparoscopically through separate groin incisions; the left side required mesh in the repair and the right side used simple suturing.

**T** **F** Two codes are required to classify the interventions performed — one code for repair with mesh (left) and another code for without tissue (right).

### Question 4

Choose the one correct answer:

The description “a portion of an organ/body part is removed along with adjacent tissue” pertains to the generic intervention

Excision, partial (87)

Excision, radical (91)

Excision, total (89)

# Section 3.4: Field 4 — Qualifier 1: Approach/technique

## Introduction

Qualifier 1 describes how (or why) the intervention was performed. The approach/technique qualifier makes up the fourth field (sixth and seventh characters) of the CCI code and consists of a two-character alphabetic value. For example:

1.YG.80.**JA**-XX-P Repair, skin of neck using cultured tissue

## Overview

Qualifier 1 (field 4) is part of the CCI code that describes **how** the intervention was performed. Qualifier 1 is made up of two alpha characters, the nature of which depends on the section. In sections 1, 2 and 3, qualifier 1 is used to capture the approach and technique used during an intervention. In Section 5, qualifier 1 is used to capture the approach and technique or method. In Section 6, technique or reason is captured with qualifier 1. In Section 7, the reason or method is captured. Finally, in Section 8, the route or nature of administration is captured with qualifier 1. This section focuses on the use of qualifier 1 in sections 1, 2 and 3 of CCI.

### Caution

To complete a CCI code, there must be a qualifier 1 included with the code.
A complete CCI code consists of a minimum of 7 and maximum of 10 characters.

**Example 1**

1.VA.74.LA-NW Fixation, hip joint open approach fixation device alone, using plate, screw

**Explanation:** Qualifier **LA** represents an open approach used during the intervention.

**Example 2**

1.ZZ.35.HA-C1 Pharmacotherapy, total body blood and blood forming organ agents percutaneous approach [intramuscular, intravenous, subcutaneous, intradermal], using antithrombotic agent

**Explanation:** Qualifier **HA** represents a percutaneous needle approach [injection] used during the intervention.

### Approach +/– technique

Qualifier 1 *usually* always includes an operative approach, but it also often includes both the approach(es) and the technique(s) that were employed with an intervention.

## Tip

More often than not, qualifier 1 identifies the approach (+/– technique) used for the intervention; however, there are a handful of qualifier 1s that do not. For example, HZ describes that there is elution from an implanted device in the following code: 1.IL.35.HZ-M8 *Pharmacotherapy (local), vessels of heart elution from implanted device of immunosuppressive agent*. HZ Elution from implanted device, is describing the technique of the pharmacotherapy.

### Example 1

1.VA.74.LA-NW Fixation, hip joint open approach fixation device alone using plate, screw

**Explanation:** Qualifier **LA** denotes only that an open approach was used during this intervention.

### Example 2

1.NF.78.BN Repair by decreasing size, stomach endoscopic per orifice approach using circular stapling or suturing [plication] technique

**Explanation:** Qualifier **BN** denotes that an endoscopic per orifice approach was used and the technique employed was circular stapling or suturing.

### Generic versus user-friendly description

The values for qualifier 1 are generic (standardized) and thus are consistent in their meaning throughout the classification. However, the generic description may be modified to create a user-friendly description for a specific rubric/code to more accurately reflect the nature of the particular intervention and to assist the coder. For example, the generic description for approach qualifier **DA** is *using endoscopic approach*, but at code 1.AC.53.**DA**-PL *Implantation of internal device, ventricles of brain of pressure measuring/monitoring device using endoscopic **[ventriculoscopic]** approach*, the description of the approach includes the name of the particular type of endoscope used at this site.

### Further resources

Refer to CCI Folio Views, Appendix A — CCI Code Structure, Qualifier 1, for the entire listing of qualifier 1 values and their generic description for the different sections of CCI. These are a reference list (summary) only; a particular qualifier may or may not be valid (available for use) for any given intervention.

## Approach

An operative approach is the means whereby the care provider gains access to the site being operated upon, and sufficient exposure to the surgical field for the intervention. Operative approaches range from long incisions to no incisions at all, and there are many variations used for any given intervention.

### Invasiveness

Operative approaches continue to move in the direction of using less invasive (intrusive) methods to gain entry to the operative site. Terms such as “non-invasive,” “minimally invasive” and “mini approach” are a sign of the times. Even the phrase “minimizing minimally invasive surgery” is seen. Understanding how operative approaches are classified in CCI will lend confidence to assigning the proper approach in any circumstance.

### Tip

One reference says, “Gallbladder surgery has evolved from a large foot long incision below your right rib cage to four small laparoscopic incisions to one incision hidden in your navel. It is incredible how quickly minimally invasive surgery has evolved.”[1] Another makes mention of a multiple-instrument access port used for endoscopies: “The SILS Port is a flexible plug that can be placed within a small incision in the navel. The surgeon can then insert up to three laparoscopic instruments — such as scissors or forceps — through holes in the plug.”[2]

## Basic types of approaches

There are many methods (and combinations of methods) used to gain access and exposure to operative sites. The method(s) used involves factor such as the type of intervention being performed, the degree of exposure of surgical field required and the care provider's preference.

The basic types of approaches included in CCI are listed in the following table:

| Type of approach | Basic qualifier* | Method used to gain access | Example(s) | Notes |
|---|---|---|---|---|
| **Open approach†** | LA | Via incision | Suture of trachea using collar incision (through the front of the neck) to expose the trachea/laceration | The incision (surgical cut) can incorporate (go through) any kind of body tissue, e.g., bone (craniotomy) for access to the brain. |
| **Endoscopic approach** | DA | Via endoscope | Arthroscopic drainage of shoulder joint | An endoscope can be inserted in one of two ways: per orifice or via a small incision(s). When the approach is via a small incision(s) this is also referred to as "percutaneous endoscopic approach."<br>When an endoscope is inserted in this manner, the basic approach qualifier DA is assigned. |
| **Per orifice approach** | CA | Via natural body opening | Transnasal removal of stent of eustachian tube | Once inside the natural opening, additional so-called approaches are the technique (e.g., with needle, with incision). |
| **External approach** | JA | Performed from the outside of the body | Removal of corneal sutures; radiation of pituitary gland using external beam | Sometimes called a closed approach. |

| Type of approach | Basic qualifier* | Method used to gain access | Example(s) | Notes |
|---|---|---|---|---|
| **Percutaneous approach** | HA | Via the skin | Drainage of parotid gland using needle aspiration; local or systemic injection of an agent (e.g., injection of an antihemorrhagic agent into the artery to control bleeding) | Percutaneous approach includes interventions that (once initial access is gained to begin the intervention) are subsequently performed through the accessed site. Examples are via a catheter (transcatheter) (e.g., infusion of pharmacological agent); via a needle (transneedle) (e.g., injection of pharmacological agent); or remotely via blood vessels (e.g., transarterial, transluminal) (e.g., coronary artery angioplasty). |

**Notes**

* Essentially, a basic approach qualifier is one used when a single method of obtaining access to the operative site is employed. When there are combined approaches, the value of the qualifier changes. For example, if the approach is arthroscopic (endoscope inserted into a joint through an incision), the qualifier is DA. But if the approach is endoscopic per orifice, the qualifier changes to BA (e.g., colonoscopy [endoscope inserted into colon through natural opening]). Or a very specific combined approach may have been employed, such as "combined endoscopic thoracoabdominal approach" (endo with open of two cavities), for which the designation is FA.

† Sometimes, open approach (LA) has a different meaning — LA is not the method used to gain access; rather, it is the technique that is employed to accomplish the intervention. For example, at 1.YE.52.^^ *Drainage, lip* there is an option of LA for qualifier 1. This is used when the lip is incised to accomplish the drainage (versus needle aspiration [HA], for instance, which is another option).

## Distinguishing between approaches

Sometimes it is difficult to tell the difference between the approaches that are available for a given intervention. Thoughtful consideration of the options for the particular intervention should assist with this.

**Example 1:** At rubric 1.ET.56.^^ *Removal of foreign body, nose* there are three options for the approach taken to remove a foreign body from the nose:

1.ET.56.CA using per orifice approach

1.ET.56.JA using external approach (for simple extraction)

1.ET.56.LA using open (incisional) approach

Approach qualifier CA — using per orifice approach means that the care provider has reached inside one of the nostrils (nasal lumen or passageway) and removed the foreign body that is lodged there or in the nasal cavity, leaving the tissue intact. The foreign body may be removed by mechanical extraction (forceps) and/or irrigation or suction.

Approach qualifier JA — using external approach (for simple extraction) means that the care provider has not had to gain access through the nostrils to reach the foreign body or make an incision to remove it. The foreign body is visible from the outside of the body and is removed manually or mechanically (e.g., using forceps).

Approach qualifier LA — using open (incisional) approach means that the care provider has had to make an incision to successfully expose and remove the foreign body. For example, if a foreign body has been inside the nose for a while and has become impacted, a per orifice approach with an incision may be required to access and remove the foreign body.

**Example 2:** At rubric 1.TA.52.^^ *Drainage, shoulder joint* there are four qualifier options for the approach taken to drain a shoulder joint:

1.TA.52.DA using endoscopic [arthroscopic] approach

1.TA.52.HA using percutaneous (needle) aspiration

1.TA.52.WJ using open excisional approach [e.g. bursectomy]

1.TA.52.WK using open incisional approach [e.g. bursotomy]

Approach qualifier DA — using endoscopic [arthroscopic] approach means that the care provider has inserted an arthroscope into the shoulder via a small incision(s) and, using instrumentation that is introduced via a small incision(s), has drained the shoulder joint, leaving the tissue intact.

Approach qualifier HA — using percutaneous (needle) aspiration means that the care provider has inserted a syringe (needle attached to a hollow cylinder with a plunger) through the skin and other structures into the shoulder joint and has withdrawn fluid through the needle into the cylinder.

Approach qualifier WJ — using open excision approach means that the care provider has made an incision into the shoulder joint and has excised tissue there in order to effect drainage.

Approach qualifier WK — using open incisional approach means that the care provider has made an incision into the shoulder joint and has incised tissue there in order to effect drainage.

## Tip

One way to assist with telling the difference between the available approach options is to imagine the physician (or even yourself) performing the intervention. What are they doing when they take this approach to the intervention? Cutting? Using forceps that reach inside a natural opening? Not going inside the body at all?

### Percutaneous approach versus open approach

There is a fine line between a puncture or (very) small incision that can be described as percutaneous and what constitutes an open approach to which no strict rule can be applied (i.e., when does “percutaneous” become “open”?). An open approach has its degrees, too. A “mini approach” can be thought of as one that employs a smaller incision (open approach) than is traditionally made. Each surgical specialty employs a variety of ever-evolving approaches and terminology to describe them.

As a general rule, coders should be guided by the documentation. If the documentation says “percutaneous,” capture it as such; if it says “open,” capture it as such. When in doubt, the best course of action is to ask the physician.

## Tip

Do not confuse the mention of a **guide wire** as being associated with any one particular type of operative approach. A guide wire is a thin, usually flexible wire that can be inserted into a confined or tortuous space to act as a guide for a subsequent intervention. Guide wires have many uses, including to position an IV catheter, endotracheal tube, central venous line or gastric feeding tube or to localize a tumour of the breast for subsequent surgery. Each of these is an example of a percutaneous approach — through the skin to access a blood vessel (percutaneous transluminal) or the stomach or the tumour. Guide wires may also be employed with other operative approaches. For example, guide wires may be used in open orthopedic surgery, where they may also be referred to as **guide pins**. Here a guide pin may first be placed down the centre of the femoral neck in hip arthroplasties to establish the pathway for reaming of the bone and insertion of the implant.

## Combined approaches

Many times, more than one operative approach is used in the performance of the same intervention. When this occurs, only one approach qualifier may be selected from the qualifiers that are available at the rubric. CCI has numerous approach qualifiers that are specific to particular combinations of approaches and makes them available where they are commonly used.

### Key point

Only one code with one approach qualifier — denoting the single or combined approach — can be assigned for **each separate intervention** that was performed. If an approach qualifier is not available for the approach that was used, assign the approach qualifier that is the best fit for the case. This can be followed up by submitting a coding question requesting an additional approach qualifier at the rubric in question along with documentation that supports that this approach was used for that intervention.

### Tip

Do not confuse the “same intervention” with the “same intervention episode.” During an intervention episode, more than one type of intervention may be performed, and each of the codes for the different interventions will have an approach qualifier assigned to it per the operative approach(es) employed with that intervention.

# Technique

The operative technique is the method used by the care provider to complete the intervention. The technique is sometimes combined with the approach in qualifier 1; for example, qualifier 1 WU represents *using open approach with tenodesis technique*. Technique can also be included in the CCI code in other ways.

**Example**

| | |
|---|---|
| 1.TC.80.WU-NW-A | Repair, rotator cuff open approach, using tenodesis with screw fixation [e.g. tendon with a bone plug fixed to bone with screw], with autograft [e.g. tendon, fascia] |

**Explanation:** Qualifier 1 WU — open approach using tenodesis includes both the approach (open) and the technique (tenodesis). (The screw fixation is included in qualifier 2 [NW] and the autograft in qualifier 3 [A].)

## Various ways of including technique in CCI codes

The care provider always uses one technique or another (or a combination) in the performance of an intervention. In CCI, sometimes the technique is identified in qualifier 1; sometimes the technique is evident in qualifier 2; sometimes one aspect of the technique (tissue that is used) is identified in qualifier 3; sometimes a technique employs a separate code; and other times the technique is incorporated as part of the code title or the particular technique employed is not expressed at all.

**Example 1**

1.FX.50.WK *Dilation, oropharynx per orifice approach using incisional technique*

**Explanation:** In this example, the approach (per orifice) and technique (incisional) are included in qualifier 1 (WK).

**Example 2**

1.FX.50.BA-BP *Dilation, oropharynx endoscopic per orifice approach using rigid dilator*

**Explanation:** In this example, the approach (endoscopic) and technique (using rigid dilator) are identified separately in qualifier 1 (BA) and qualifier 2 (BP), respectively.

**Example 3**

1.FX.87.LA-XX-G *Excision partial, oropharynx using open approach and pedicled flap [e.g. deltopectoral, forehead, pectoralis major or tongue flap] (for closure of defect)*

**Explanation:** In this example, qualifier 1 (LA) represents the approach only (open). There is no qualifier 2. (The blank field is replaced with XX.) Qualifier 3 (G) indicates that there was tissue used (specifically a pedicled flap) as part of the technique in the overall intervention of partially excising the oropharynx. The implication is that the main technique for the excision was to resect (cut out and remove) part of the oropharynx.

**Example 4**

1.FX.87.BA *Excision partial, oropharynx using endoscopic per orifice approach (and simple apposition technique or no closure*)

**Explanation:** In this example, qualifier 1 (BA) represents the approach only (endoscopic per orifice). The code title indicates that there was either no closure technique required (e.g., part of the oropharynx was excised but only cautery was required to seal the wound) or that the simple technique of suturing was used. “Simple” or “common” techniques used for a given intervention are often incorporated into the code title.

**Example 5**

The rubric 1.GJ.26.^^ *Brachytherapy, trachea* contains the following four qualifier options:

1.GJ.26.BA using endoscopic per orifice approach

1.GJ.26.CA using per orifice approach

1.GJ.26.HA using percutaneous (transcatheter or transneedle) approach

1.GJ.26.LA using open (incisional) approach

**Explanation:** The four codes included in the rubric for brachytherapy of the trachea reflect only the operative approach taken to access and expose the surgical field. The technique that was used to actually place the radioactive material into the container or body is not part of the code at all.

**Example 6**

1.NM.87.DF Excision partial, large intestine endoscopic [laparoscopic, laparoscopic-assisted, hand-assisted] approach colocolostomy anastomosis technique

7.SF.14.ZX Robotic assisted telemanipulation of tools, service using system NEC

**Explanation:** Robotic-assisted laparoscopic sigmoidectomy with colocolostomy requires two codes. In the first code, qualifier 1 (DF) reflects the approach (endoscopic) and technique (colocolostomy anastomosis). The second code reflects that the intervention also employed the use of a robotic system in the performance of the intervention.

**Example 7**

1.NF.86.MR-XX-A Closure of fistula, stomach using autograft [e.g. skin, fascia graft] for fistula terminating in urinary tract

**Explanation:** In the above example, qualifier 1 (MR) reflects the approach (open) and that the fistula being excised terminates in the urinary tract. (The full description of qualifier 1 MR is *using open approach for fistula terminating in urinary tract* per the list of qualifier 1s in Appendix A of CCI.) This example demonstrates that qualifier 1 is also used to reflect the terminating point of fistulas.

## Important note

A good understanding of the structure of CCI lends confidence to the coding of interventions. However, for code assignment it does not matter how the technique is incorporated in the CCI code. What is important is to carefully review the code options in the rubric and to select the one code that describes the intervention that took place.

## Use of qualifier ZZ — Technique NEC

Occasionally the approach qualifier ZZ *technique NEC* is made available at a rubric. This qualifier is selected when the technique that was used is not among the available options (is not elsewhere classified).

**Example**

| | |
|---|---|
| 1.GZ.12.JA-UE | Therapy, respiratory system NEC using vibration device |
| 1.GZ.12.JJ | Therapy, respiratory system NEC using manual technique (e.g. percussion, clapping) |
| 1.GZ.12.ZZ | Therapy, respiratory system NEC using technique NEC |

**Explanation:** In the above example, if the technique used for therapy of the respiratory system is not a vibration device or a manual technique, such as percussion or clapping, select 1.GZ.12.ZZ *Therapy, respiratory system NEC, using technique NEC*.

## Multiple techniques and technique not available

Sometimes more than one technique is used in the performance of the same intervention. When this occurs, only one code can be selected even if all of the techniques employed are not embraced in that code. If the technique or techniques are not available for the intervention being coded, assign the code that is the best fit for the case.

# Knowledge checks

Complete the following knowledge checks and then review the answers in Appendix A. If you answered any questions incorrectly, it is recommended you go back and review the relevant information within this section.

**Question 1**

Choose T for true or F for false for the following statement:

**T** **F** A complete CCI code always includes qualifier 1.

**Question 2**

Choose T for true or F for false for the following statement:

**T** **F** Qualifier 1 always includes both the operative approach and the technique used with an intervention.

**Question 3**

Choose T for true or F for false for the following statement:

**T** **F** The difference between a percutaneous approach and an open approach is that a percutaneous approach employs a puncture, whereas an open approach employs an incision.

**Question 4**

Choose T for true or F for false for the statement that follows the clinical scenario:

Scenario: A patient had a resection of the rectum for which both an endoscopy (through the abdomen) and an incision (through the perineum) were used to perform the surgery.

**T** **F** For this case, an intervention code for the resection of the rectum must be assigned twice — one code will be specific to the endoscopic approach and the second code will be specific to the open approach.

**Question 5**

Choose T for true or F for false for the following statement:

**T** **F** Sometimes the technique used to perform the intervention is included in qualifier 2 instead of qualifier 1.

# Section 3.5: Field 5 — Qualifier 2: Agent or device

## Introduction

Qualifier 2 describes the tools (devices), agents or modalities (pharmacotherapy) used during the intervention. The agent or device qualifier makes up the fifth field (eighth and ninth characters) of the CCI code and consists of two characters. For example:

1.YG.80.JA-**XX-**P  Repair, skin of neck using cultured tissue

In this section, the focus is on the use of qualifier 2 for devices.

## Overview

Qualifier 2 (field 5) is made up of two characters, the nature of which depend on the section. In sections 1, 2 and 5, qualifier 2 is used to capture either the device or the agent used during an intervention. The qualifier for a device consists of two alpha characters; for example, “AE” represents a curette. The qualifier for an agent consists of an alpha and a numeric character; for example, “1C” represents a thrombolytic agent and “M1” represents an alkylating agent. In Section 6, qualifier 2 is used to capture the method or tool used with cognitive, psychosocial and sensory diagnostic and therapeutic interventions. In Section 8, qualifier 2 captures the immunization agent used.

### Further resources

Refer to CCI Folio Views, Appendix A — CCI Code Structure, Qualifier 2, for the entire listing of qualifier 2 values for the different sections of CCI. These are a reference list (summary) only; a particular qualifier may or may not be valid (available for use) for any given intervention.

While fields 1 to 4 (section, group, intervention, approach/technique) of the CCI code are required to make up a complete code, qualifier 2 — agent or device (field 5) must be included only when it is available and applicable to a given intervention. As with qualifier 1 — approach/technique (field 4), the values for qualifier 2 are generic. They are thus consistent in their meaning throughout the classification, although the user-friendly description may be modified depending on the rubric/code to more accurately reflect the nature of the particular intervention.

# Devices

Some aspects of the use of qualifier 2 for devices are described in this section.

## Dual use

When qualifier 2 represents a device (versus an agent), it can apply to either a device that was used **to perform** an intervention or a device that was **left implanted**.

**Example 1**

1.RM.59.DA-**AG** Destruction, uterus and surrounding structures endoscopic [laparoscopic] approach, using laser

**Explanation:** In this example, a laser device (AG) was used to perform, for example, ablation of the endometrium. When used in this manner, qualifier 2 is describing the use of a device in the performance of the intervention.

**Example 2**

1.RM.53.CA-**EM** Implantation of internal device, uterus and surrounding structures of brachytherapy applicator using per orifice (vaginal) approach

**Explanation:** In this example, a brachytherapy applicator (EM) was implanted in the uterus and/or surrounding structures. When used in this manner, qualifier 2 is identifying the type of device that was implanted.

## Brand names

Documentation may simply refer to the brand name (what a specific product produced by a particular company is called) of a device, and sometimes a brand name is included in CCI. For example, the CUSA EXcel™ system (an ultrasonic surgical aspirator that provides tissue fragmentation, irrigation and aspiration) is noted in CCI at rubrics where it is commonly employed. Due to their ever-changing nature, many brand names are not included in CCI, leaving the coder unsure of the generic nature of a particular device and which qualifier to select. For example, Activa® PC Deep Brain Neurostimulator is the brand name of one type of stimulator used with the brain. At 1.AN.09.^^ Stimulation, brain there are four different qualifiers for devices:

- **DV** *using external electrical stimulation (for shock or convulsion)*;
- **ED** *using external manual activation (of implant)*;
- **LZ** *using external application of magnetic coil (for TMS)*; and
- **QQ** *using remote radio transmitter activation (of implant)*.

Which qualifier should be selected? Knowledge of what this device is and how it works reveals that ED using external manual activation (of implant) is the correct choice.

## Caution

Coders should not simply guess which qualifier to select for a device by its brand name only. Look for clues in the documentation (e.g., "using an ultrasonic aspirator, I then . . ." or "ultrasonic aspiration was performed") and conduct some research to learn more about the device (e.g., search the internet or discuss with OR staff).

## Use of qualifier GX — Device NEC

Most interventions employ some kind of a device, be it (highly) technical or not (e.g., radiofrequency probe versus cotton swab), and all implant interventions leave some kind of device of more or less complexity in situ (e.g., multi-channel cochlear implant versus tube). Sometimes the device qualifier is very specific to the device used and sometimes the more general GX *and device NEC* is used. Other times there is no qualifier for the device at all.

Common routinely used devices that do not impact resource use are sometimes not assigned a qualifier; the CCI code is complete once the approach/technique has been included. At other times, commonly used devices are assigned qualifier GX *and device NEC*, or qualifier GX *and device NEC* is available for use for devices other than those that are classified elsewhere.

**Example 1:** The rubric 1.CS.56.^^ *Removal of foreign body, conjunctiva* contains the following five qualifier options:

| | |
|---|---|
| 1.CS.56.JA | using external manual approach [e.g. cotton, needle, spud] |
| 1.CS.56.JA-D2 | using external approach and irrigating solution [saline, water] |
| 1.CS.56.JA-LZ | using external approach and magnet |
| 1.CS.56.LA | using incisional approach and device NEC |
| 1.CS.56.LA-LZ | using incisional approach and magnet |

**Explanation:** In this example, "cotton" and "needle" are two common routinely used devices for removing a foreign body from the conjunctiva; they do not impact resource use and, while they are listed as examples, they are not assigned a specific device qualifier. Assigning approach/technique qualifier JA for the approach completes the code. Also in this example, the phrase "and device NEC" is used in the code title for 1.CS.56.LA to mean that an incisional approach with a device other than a magnet was employed. Note that a specific device qualifier for device NEC is not assigned.

**Example 2:** The rubric 1.HZ.56.^^ *Removal of foreign body, heart NEC* contains the following two qualifier options:

1.HZ.56.GP-GX using percutaneous transluminal approach and device NEC [e.g. pigtail snare, gooseneck snare, basket device]

1.HZ.56.LA using open approach

**Explanation:** At this rubric, commonly used pigtail or gooseneck snares and basket devices are grouped together under qualifier GX *and device NEC* to identify that a device was used but not the specific kind, as this is not deemed important for this intervention. These devices, however, may be specifically identified at other rubrics (e.g., 1.PG.57.LA-AM *Extraction, ureter using open approach and basket device (dormia)*, where the value AM specifically represents a basket device).

**Example 3:** The rubric 1.PE.50.^^ *Dilation, renal pelvis* contains the following options for devices used for dilation when there is an endoscopic per orifice approach [retrograde].

1.PE.50.BA-BD using balloon dilator [with or without cutting wire]

1.PE.50.BA-BJ using flexible dilator [e.g. catheter, stent]

1.PE.50.BA-BF using laser incision and balloon

1.PE.50.BA-BI using laser incision and flexible dilatator [e.g. catheter, stent]

1.PE.50.BA-GX using device NEC [e.g. endoshears]

**Explanation:** In this example, qualifier GX *and device NEC* is available for use for devices other than balloon dilator (BD), flexible dilator (BJ), laser incision and balloon (BF) and laser incision and flexible dilatator (BI).

The qualifier GX *and device NEC* may also be used in rubrics where an implanted device is always involved as the default for a specific device that is not elsewhere listed as an option.

**Example 4:** The rubric 1.SH.55.^^ *Removal of device, soft tissue of the back* contains the following options for devices:

1.SH.55.JA-EB of radioactive implant using external approach

1.SH.55.JA-FF of closure device (e.g. suture) using external approach

1.SH.55.JA-GX of device NEC using external approach

1.SH.55.JA-TS of wound drain or drainage catheter using external approach

1.SH.55.LA-EB of radioactive implant using open approach

**Explanation:** In this example, a device is always involved because the rubric is for interventions to remove a device. If the device being removed by external approach is neither a radioactive implant (EB) nor a closure device (FF) nor a wound drain or drainage catheter (TS), 1.SH.55.JA-GX *Removal of device, soft tissue of the back of device NEC using external approach* is selected.

Finally, in the event that a new type of device is not identified in the available options, qualifier GX *and device NEC* would apply as well.

## Multiple devices

Sometimes more than one of the devices listed as an option are used in the intervention that is being captured. In this circumstance, the choice of which qualifier to select is based on whether the multiple qualifier is available or not.

### Multiple qualifier is available

Occasionally, the qualifier GY *using multiple devices* is available for use when it is needed.

### Example

The rubric 1.CN.59.^^ *Destruction, retina* contains the following options for devices:

| | |
|---|---|
| 1.CN.59.LA-AD | using cryoprobe [cryotherapy] |
| 1.CN.59.LA-AG | using laser |
| 1.CN.59.LA-GX | using device NEC |
| 1.CN.59.LA-GY | using multiple devices<br>Includes: laser and cryotherapy |

In this example, if both laser and a cryoprobe are used, or if a laser (or cryoprobe) is used with another type of device, 1.CN.59.LA-GY *Destruction, retina using multiple devices* is selected.

### Multiple qualifier is not available

Other times, the qualifier GY *using multiple* devices is not available for use.

**Example:** The rubric 1.AF.59.^^ *Destruction, pituitary region* contains the following options for devices when there is a transcranial approach:

| | |
|---|---|
| 1.AF.59.SZ-AD | with cryoprobe |
| 1.AF.59.SZ-GX | with device NEC |
| 1.AF.59.SZ-AW | with radiofrequency probe |

**Explanation:** In this example, if both a cryoprobe and a radiofrequency probe are used, or if a cryoprobe (or radiofrequency probe) is used with another type of device, a selection of only one qualifier must be made. The choice may be based on the qualifier (device) that is the most resource intensive or the qualifier (device) that is of most interest for collection purposes in your facility. It is inappropriate to assign a code from a rubric multiple times to capture each device, as this inflates the number of interventions performed. See also Hierarchy for orthopedic devices (below).

## Important note

The coding standard *Multiple Codes in CCI* states that multiple codes from the same rubric are **not** assigned to show that different devices were used at the same operative site.

### Hierarchy for orthopedic devices

In many orthopedic procedures, the surgeon may use more than one device. Coders must make a selection based on the following hierarchy of devices (from highest to lowest).

Hierarchy of devices used **to stabilize the bone**:

- Endoprosthesis
- Intramedullary nail
- Screws and plates
- Pins and nails
- Wire, staples and mesh
- No device

Hierarchy of devices used **to repair ligament or soft tissue**:

- Biodegradable binding device (e.g., bioscrews, biodegradable anchors)
- Screw (and washer)
- Endobutton or staple
- Sutures, suture anchors

For example, in a case where both an intramedullary nail and screws were used to stabilize the bone, the correct device qualifier using the hierarchy information above would be **LQ** — intramedullary nail, as an intramedullary nail is more resource intensive than the screws.

## Further resources

Refer to the coding standard *Multiple Codes in CCI*.

## Classifying K-wires

Classification of Kirschner wires (K-wires) can be difficult. Are they captured as pins or as wires? The problem of whether to capture them as a wire or a pin lies both in their characteristics and in the documentation — K-wires range in size from a thin “wire” to a thick “pin” (0.6 mm to 3 mm), and the terms “pins” and “wires” are often used interchangeably by clinicians. Coders should be guided by the documentation and the type of intervention being performed. In cases where a K-wire is **placed through** (drilled through) the bone to hold fracture fragments in place (percutaneous pinning) this should be classified to “pin.” In cases where a K-wire is used (as a cerclage) to **encircle** fracture fragments to pull fracture fragments together, this should be classified to “wire.”

In cases where the terms “pin” and “wire” are used interchangeably in the same operative report, a hierarchy for fixation devices exists, and a pin takes precedence over a wire when selecting the appropriate qualifier.

## Best fit (device is not available)

If a particular device that has been used during the intervention is not included in the device qualifiers that are available, a choice must be made based on the available qualifier that is the closest fit for the case being coded. The best fit is the one closest in terms of resource use. When it is not clear which device meets this criterion, seek advice from the OR staff.

# Knowledge checks

Complete the following knowledge checks and then review the answers in Appendix A. If you answered any questions incorrectly, it is recommended you go back and review the relevant information within this section.

### Question 1

Choose T for true or F for false for the following statement:

**T** **F** For Section 1 in CCI, qualifier 2 represents *either* a device that is used during an intervention *or* a pharmacological agent that is administered, but not in combination.

### Question 2

Choose T for true or F for false for the following statement:

**T** **F** When qualifier 2 represents a device, it applies only to devices that are left implanted in the patient's body.

### Question 3

Choose T for true or F for false for the following statement:

**T** **F** A K-wire is always classified as a wire.

### Question 4

Choose the one correct answer for the following scenario:

A patient undergoes an elbow fixation. The surgeon uses both wire and pin to fixate the elbow. The device qualifier(s) that is selected is

Both *KD wire, mesh, staple and NV pin, nail*

KD *wire, mesh, staple*

NV *pin, nail*

NW *plate, screw*

# Section 3.6: Field 6 — Qualifier 3: Tissue

## Introduction

Qualifier 3 is activated only in Section 1 to describe the specific type of tissue employed during the intervention. The tissue qualifier makes up the sixth field (tenth character) of the CCI code and consists of one letter.

For example:

1.YG.80.JA-XX-**P** Repair, skin of neck using cultured tissue

## Overview

The final component of the CCI code is a single alpha-character qualifier for any tissue that is used during the intervention. The qualifier 3 field is used for tissue in Section 1 — Therapeutic Interventions only. At rubrics where tissue may be required to repair or reconstruct a defect (due to trauma or previous surgery), or to complete a closure, options are available for the types of tissue that are typically employed at that site.

Tissue is used and tissue qualifiers are present for many different types of generic interventions; these include Repair (80), Excision (87–92), Reconstruction/construction (84), Bypass (76), Closure fistula (86), Fixation (74), Transplant (85) and Transfer (83).

## Tissue options

Numerous types of tissue are employed as part of an intervention, including skin, fat, bone, cartilage, omentum, dura, muscle, nerve and synthetic tissue; however, tissue options are not based on the type of tissue that is used, but rather on the **source** of the tissue (e.g., one's own body, an animal, synthetic, cultured) and whether the tissue is a **graft or flap**.

### Grafts

The key features of a graft (versus flap) are that

- The tissue may come from any source (e.g., self, animal, man-made); and
- It does not have its own blood supply.

**i) Autograft (A, B)**

An autograft is tissue that is moved (grafted) from one location to another in the **same individual**.

Autografts have two tissue values: **A** autograft; and **B** split thickness. An autograft may also be referred to as autologous tissue.

## Tip

Tissue value A *autograft* can have a user-friendly description of "full thickness" at any given rubric. An autograft that is not otherwise specified is a full thickness graft.

### ii) Homograft (I, J, K, M)

A homograft is an organ or tissue procured **from a human donor** and moved (grafted) **to a human recipient**. A homograft may be used promptly after procurement or following preservation in a tissue bank. Homografts have four tissue values: **I** homograft from a related donor; **J** homograft from a living donor; **K** homograft NOS; and **M** homograft that has been purged to destroy malignant cells. A homograft may also be referred to as an allograft, allogeneic organ or homologous tissue.

### iii) Xenograft (L)

A xenograft is an organ or tissue procured **from an animal source** (e.g., porcine [pig] valve, bovine [cow] bone tissue) and moved (grafted) **to a human being**. A xenograft may also be referred to as a heterograft, heterologous graft or heteroplastic graft.

### iv) Cultured tissue (P)

Cultured tissue is tissue or cells that are **propagated in vitro** (grown in an external environment in special media conducive to their growth) and then transferred for use. An example of the use of cultured **tissue** is cultured skin that is grafted in place to treat burns. An example of the use of cultured **cells** is hepatocyte (liver cell) propagation and transplantation (injection) for patients with liver disease.

### v) Synthetic tissue (N)

Synthetic tissues are **man-made materials** that are used to replace tissue (fill a defect or join sites) and often also to encourage tissue regeneration. The particular materials that are used and their form depend on the tissue being replaced and the functionality required. Synthetic tissues include silicone tubing that serves as a conduit to bridge the gap between a severed nerve; bone paste, an osteoconductive bone substitute, used to fill gaps and defects in bone; and mesh, a woven or knitted fabric made of plastic or metal, used, for example, to reinforce hernia repairs.

### vi) Composite graft (D)

This tissue qualifier is specific to xenograft with synthetic tissue.

### Tip

Do not confuse **pledgeted sutures** with a tissue graft. Pledgeted sutures are sutures that are supported (bolstered) with biological tissue (e.g., pericardium) or synthetic tissue (e.g., felt, Teflon) to prevent tearing of the site being repaired. They are also used to reinforce suture lines and give added strength to weak tissues, but this use is still not considered tissue for purposes of assigning a tissue qualifier.

## Flaps

The key features of a flap (versus graft) are that

- The tissue is always from the patient's own body; and
- It retains its own blood supply.

**i) Local flap (E)**

With a local flap, tissue that is **adjacent** to (adjoining) the defect in need of coverage is cut on three sides, leaving the fourth side attached to its blood supply. The procured tissue is then moved into position, leaving the fourth side intact. Types of local flaps are based on the technique used to transfer them and include V-Y advancement flaps, transposition flaps, Z-plasties and rotation flaps.

**ii) Pedicled (distant or regional) flap (G)**

A pedicled flap is one that is procured a **distance** from the defect in need of coverage. The tissue is left attached to the procurement site by a pedicle (stalk) that supplies the tissue with blood. A pedicled flap may need to be split (divided) so that it can reach the distant site where it is being placed. Source documentation may refer to "tunnelling" of the flap, which is a means whereby the flap is passed internally through a channel from the point of procurement (where the pedicle is intact) to where it will be transposed. Once a new blood supply has been established where the flap has been inset, the pedicle may be severed. An example of the use of a pedicled graft is a coronary artery bypass graft (CABG) that employs a pedicled internal mammary artery.

**iii) Free flap (F)**

A free flap is tissue that is raised (dissected away from surrounding tissue) on its vascular pedicle (main blood vessels come with it), is **detached** from the procurement site and is relocated to the defect in need of coverage. The blood vessels of the flap are then joined to blood vessels at the recipient site by microvascular anastomoses to allow revascularization. An example of a free flap is a tarsoconjunctival flap (from the opposite eyelid) for eyelidreconstruction.

### Tip

Do not confuse the routine “raising (elevation) of a flap” or “flap approach” that is done to gain access to the operative site with an intervention to obtain tissue from one site and transpose it to another site. Routine raising of a flap is an inherent part of many interventions, whereas flap approach is a type of approach (qualifier 1) that is used with some interventions (e.g., interventions on the brain).

### Combined sources of tissue (Q)

This value is selected when a particular repair employs the use of any combination of the types of tissue above (e.g., any flap with any graft; bone graft [A] with bone paste [N]).

### Further resources

A list of all tissue qualifiers is located in CCI Folio Views, Appendix A — CCI Code Structure, Qualifier 3, Section 1 Tissue. This is a reference list (summary) only; a particular tissue qualifier may or may not be valid (available for use) with a specific rubric.

## Procurement of tissue

The harvesting of tissue and organs is captured by the generic intervention Procurement (58) for the site from which the tissue was obtained. Procurement can be performed on a deceased donor or a living donor. Procurement of a patient’s own tissue for use during the current intervention episode is captured only when a separate incision is required to obtain the tissue for grafting. The procurement site then becomes another operative site requiring care and with potential for complications.

For example, a patient receiving a CABG may require procurement of the saphenous vein. As this necessitates a separate incision, the use of the code for procurement of the vein (1.KR.58.^^ *Procurement, veins of leg NEC*) is required. On the other hand, when a local flap (e.g., Z-plasty) is performed, the tissue used is from the same area; there is no separate incision performed and the tissue qualifier for the local flap itself (tissue qualifier “E”) is all that is required.

### Tip

When the tissue qualifier is E, this usually means a procurement code is not required.

### Important note

Whenever a segment of the intestine is harvested, a procurement code must be assigned. This occurs most often for repairs and reconstructions of the urinary tract and esophagus. Because the creation of a defect along the gastrointestinal tract always requires careful post-surgical monitoring, the procurement of intestine must be coded.

### Further resources

See the coding standard *Procurement or Harvesting of Tissue for Closure, Repair or Reconstruction* for additional details.

## Best fit

Occasionally, the appropriate tissue qualifier is not available for the intervention that is being coded. When this occurs, select the tissue qualifier that is the closest fit to the case you are coding.

## Knowledge checks

Complete the following knowledge checks and then review the answers in Appendix A. If you answered any questions incorrectly, it is recommended you go back and review the relevant information within this section.

**Question 1**

Choose T for true or F for false for the following statement:

**T** **F** One distinguishing feature about a graft is that the tissue that is used always comes from the patient's own body.

**Question 2**

Choose T for true or F for false for the following statement:

**T** **F** The exception to the rule that procurement of tissue from the patient's own body is captured only when there is a separate incision is that whenever a portion of the patient's intestine is harvested for use during surgery, a procurement code must be assigned.

**Question 3**

Read the following statement and choose the type of flap from the list below:

A _____ flap is one that is procured a distance from where it is needed. The tissue remains partly attached to the procurement site when it is moved to recipient site.

Free

Local

Pedicled

# Section 3.7: Attributes

## Introduction

It is not possible to incorporate all characteristics of an intervention that are of interest within an intervention code. CCI also includes attributes that can be captured on the abstract to provide further detail about the intervention.

## Overview

In CCI, attributes are separate components that can be associated with the CCI code. These attributes provide additional detail about the intervention that can be used for analytic, utilization and research purposes. Many attribute combinations tailored for use at the specific intervention rubrics are available in CCI.

There are three types (categories) of attributes based on descriptors pertaining to **status** (S) of the intervention, **location** (L) of the intervention and **extent** (E) of the intervention. Included in the location attribute field is a **mode of delivery** attribute that is used to identify the method of delivery of the intervention at certain rubrics.

Valid attributes for each category that can be applied to a given rubric are located within small boxes that are clickable if they are active (yellow, pink) or not clickable if they are inactive (grey).

### Tip

Ever wondered what the little number at the top right of an attribute box means? This is a reference code for this particular group of attributes. For example, a location attribute box that has a reference code of L72 consists of four attribute values: B for bilateral, L for left, R for right and U for unilateral unspecified. Grouping L72 always contains these four specific attribute values **and** it is mandatory to assign one of these values when this attribute box appears at a rubric. (The reference description for this particular attribute box is Bilaterality Mandatory.) A list of all CCI attribute bundles and which attributes they consist of is located in Appendix C — CCI Attributes under the heading "Use of Reference Codes for CCI Attributes." This is a reference list (summary) only; a particular attribute group may or may not be valid (available for use) with a specific rubric.

## Types of attributes

Individual attributes are categorized based on whether they describe an aspect of the status of the intervention, its location or its extent.

### Status attribute

A status attribute describes a **special circumstance** related to the intervention, for example, that the intervention was abandoned or that it is part of an overall intervention that is being performed in stages.

### Location attribute

A location attribute provides detail related to the **anatomy site** of the intervention, for example, that the intervention was performed on the left (or right) (or both) side(s) of the body. In addition to laterality, a location attribute may pertain to anatomical direction (e.g., lateral or medial) or to specific body parts (e.g., body of the uterus or endometrium).

Included in the location attribute field is a **mode of delivery attribute** that is used to identify the method of delivery of the intervention at certain rubrics; for example, the mode of delivery attribute is mandatory to apply with 7.SC.08.PM *Other ministration, personal care for assistance in dying*.

### Extent attribute

An extent attribute lends information about the **quantity** or **scope** of the intervention — for example, the number of coils used to occlude a vessel, the number of arteries that were bypassed or the length of the laceration that was repaired.

#### Tip

Users can search Folio Views for all occurrences of a particular attribute by using the Advanced Query function (F2). For example, if there is a need to know all of the rubrics at which the location attribute AT Aberrant tissue appears (is available), type the word “aberrant” in the search box in Advanced Query. Folio Views will identify all the places where the word “aberrant” appears in the classification, including attribute boxes.

## Valid versus invalid attributes

Only attributes that appear alongside the rubric title may be used with codes within that rubric. There are always three boxes displayed at each rubric (one each for status, location and extent); however, all, some or none may be active. Active attribute boxes are clickable and may be optional (**yellow**) or mandatory (**pink**). Inactive (**grey)** attribute boxes are not clickable. Only the specific attributes contained in each active attribute box may be used for that rubric.

## Mandatory versus optional attributes

On a national basis, only certain attributes are designated as mandatory to collect; all others are collected on an optional basis.

### Mandatory attributes

Attributes may be designated as mandatory to collect because they affect grouping; they provide necessary detail not present within the CCI code to support analytic, utilization and research purposes; or they provide nationally relevant detail. Mandatory attributes are identified in one of two ways: by a pink attribute box at the rubric level in Folio Views or by means of the coding standards.

#### Mandatory attribute box (pink)

The majority of mandatory attributes are identified by a clickable attribute box (pink) in Folio Views. When a mandatory attribute box is encountered, **one** of the attributes within the box **must** be selected. Failure to select an attribute will generate an error message.

### Coding standards

There are three status attribute values that are **always** mandatory **when they apply** and **when they are available**, whether or not there is an associated mandatory attribute box (pink) displayed for the rubric. The coding standards direct the use of the attributes for **abandoned**, **converted** and **revision** whenever an intervention meets the criteria for assignment of that attribute. Keep in mind, though, that the status attribute box for the rubric must be active and include the desired attribute for it to be selected.

The primary reason that these three attributes are designated as mandatory via the coding standards and not a mandatory attribute box (pink) is to reduce coder burden. These attributes are of interest when they are applicable, but most times these characteristics (abandoned, converted, revision) do not apply to an intervention. If, for example, the coder always had to make a selection between “abandoned” or “not applicable” to fulfill the requirement to identify all abandoned interventions, considerable time and effort would be spent on making this selection in order to identify those few occasions when an intervention was abandoned.

**Caution**

Mandatory attributes are CIHI-defined (standardized). Coders must use the attribute values as they appear and any definitions or direction that is provided and must not alter the meaning or use of the mandatory attributes for other purposes.

### Example

The mandatory status attribute box at rubric 1.NV.89.^^ *Excision total, appendix* consists of the following attribute values:

**0** Not applicable

**A** Abandoned after onset

**B** Incidental (to another intervention)

**C** Converted (from endoscopic to open approach)

**Explanation:** The status attribute values for this rubric must be applied as intended. The meaning of the status attribute values must not be modified: for example, the value 0 cannot be changed to mean something else — it always means “not applicable.”

### Note

Of historical interest is the fact that initially there were only four mandatory attributes in CCI involving four rubrics, whereas today there are 150 rubrics for which one or more attributes are mandatory. This number has increased as a result of demands from end-users of the data. Most mandatory attributes pertain to rubrics in Section 1 — Therapeutic Interventions; however, some are found in Section 2 — Diagnostic Interventions; Section 3 — Diagnostic Imaging Interventions; Section 5 — Obstetrical and Fetal Interventions; Section 6 — Cognitive, Psychosocial and Sensory Therapeutic Interventions; and Section 7 — Other Healthcare Interventions.

### Further resources

Refer to Appendix D — Mandatory attributes in CCI in the coding standards for a list of all mandatory attributes.

## Optional attributes

In most cases, the use of attributes is optional. Optional attributes are selected and utilized to meet internal reporting requirements. An optional (yellow) attribute box indicates that it is optional to select an attribute from that box (with the exception of the status attributes abandoned, converted and revision, as noted above).

### Important note

Users should establish which optional attributes will be used routinely (or for a defined period) for what purpose(s), in order to standardize local data collection practices.

# Abandoned, cancelled, change of plans, failed interventions and revision

The following sections discuss a number of specific attributes that are known to be challenging.

## Abandoned, cancelled, change of plans and failed interventions

The difference between an abandoned intervention, a cancelled intervention, a failed intervention and a change of plans can be confusing. Attributes apply only to an abandoned intervention; however, all four of these circumstances are discussed here so that their meaning and method of capturing are clearly distinguished.

| Type of intervention | What is it? | How is it captured? |
|---|---|---|
| **Abandoned intervention** | An "abandoned intervention" is an intervention that has begun and has reached a preliminary stage (anesthetization, incision, inspection or biopsy), at which time it is terminated due to some unforeseen circumstance. An abandoned intervention pertains to sections 1 and 5 interventions only. | 1) Assign a code for the stage at which the intervention was terminated (anesthetization, incision, inspection or biopsy).<br>2) **Optionally**, assign a code for the planned intervention. If a code is assigned, assign the status attribute A, **mandatory**. |
| **Cancelled intervention** | A "cancelled intervention" is a scheduled intervention that did not occur at all. The intervention was cancelled before it was even begun. | No code for the cancelled intervention is assigned.<br>In the case of scheduled or planned day surgery, clinic or emergency intervention, it is optional to record "CANCELLED" in the intervention field of the abstract. |
| **Change of plans** | A "change of plans" is when a different intervention than the one that was originally intended is performed. | Code only the intervention that was actually performed. |
| **Failed intervention** | A "failed intervention" is an intervention that has progressed beyond the preliminary stages but then cannot be fully realized (the expected [desired] outcome is not [fully] accomplished). | Assign a code for the intervention in the same way as one that is fully realized. It is not possible to show a failed intervention with a CCI code or attribute. This is a clinical circumstance, not a coding situation. |

**Example: Abandoned intervention**

*“Planned lung resection”*

A patient with lung cancer presented for lung resection. The patient underwent anesthesia, open thoracotomy, inspection of thoracic cavity and biopsy of the aortic arch. At this point, the surgeon felt that it would be impossible to resect the tumour and decided to stop the intervention.

This scenario meets the definition of an abandoned procedure, as the intended procedure is not initiated. Code the biopsy of the aortic arch “mandatory” and, if desired, the lung resection. If the lung resection is captured, the status attribute A Abandoned after onset must be applied.

**Example: Cancelled intervention**

*“Chemotherapy is postponed”*

A patient presents to clinic for chemotherapy, but due to lab results that indicate that the chemotherapy is contraindicated (inadvisable), the chemotherapy is postponed to another day.

The scheduled intervention was not carried out; therefore, no intervention code is assigned. “CANCELLED” is optional to enter in the intervention code field of the abstract.

**Example: Change of plans**

*“Cholecystostomy versus cholecystectomy”*

A patient was admitted for elective cholecystectomy. At the time of the intervention it was determined that the gallbladder could not be removed, as it was adherent to surrounding structures. The surgeon opted to perform a cholecystostomy instead.

This scenario is an example of a change of plans because, instead of the intended intervention (cholecystectomy), a different intervention (cholecystostomy) (still directed at the problem) was completed. The intended intervention is not considered abandoned, as an alternative procedure was performed. Additionally, since the intended intervention was not attempted, it cannot be considered failed. In this case, only the cholecystostomy is captured.

**Example: Failed intervention**

*“Attempt at angioplasty of left superficial femoral artery (SFA)”*

The operative report for this patient reads, in part, “I attempted to find the origin of the SFA with the bent tip wire and then with a straight wire but could not. After multiple attempts I decided to abort the procedure.”

This represents a failed intervention because the intervention has gone beyond anesthetization, incision, inspection or biopsy. The surgeon was unable to achieve the expected outcome (dilatation of SFA). In this case, the angioplasty (dilation) of the SFA is coded as if it were successfully completed.

### Tip

An **attempt** to perform the planned intervention, which is then not fully accomplished, is a failed intervention versus an abandoned intervention.

### Further resources

Refer to the coding standards *Abandoned Interventions*, *Cancelled Interventions*, *Change of Plans During an Intervention* and *Failed Interventions* for additional details.

## Revised interventions

Determining whether the mandatory revision attribute applies to a given intervention can be tricky. The purpose of the revision attribute and its applicability (or not) to a given intervention are discussed here for greater clarity and confidence when applying this attribute.

**a) Purpose and use of revision attribute**

The status attribute “R” is assigned when the current intervention is a complete or partial redo resulting from an expected or unexpected problem of a previous intervention.

The purpose of the revision attribute is to flag interventions that are redos and are of interest for monitoring outcomes and quality improvement. Some of the questions that this flag raises are, “How often does the original intervention have to be revisited due to a problem? At what frequency is the original intervention (routinely) redone? Is there something that can be done to reduce these occurrences?” The revision attribute is a flag that indicates that **this** intervention is a subsequent visit to (revisitation of) a **previous** operative site.

### Key point

When the **current** intervention is flagged as a revision, it is a reflection that the **original** intervention needed to be revisited.

## Important note

The intervention that is being flagged as a revision does not need to be the same as the intervention that was originally performed. It may be a completely different intervention (one to resolve a problem); a variation of the original intervention (different technique employed this time); or exactly the same as the original intervention (an identical redo).

**Arthroplasties**

A revision arthroplasty has a very distinct meaning. When the status attribute "R" is assigned with an arthroplasty that employs implantation of a prosthetic device (e.g., 1.VA.53.^^ *Implantation of internal device, hip joint*) it means that the patient has had a previous arthroplasty with implantation of a prosthetic device at that site and that some (at least one) or all of the old components have been removed and replaced with new components or a temporary cement spacer.

**b) Exceptions**

Some types of interventions are never considered revisions, while others may be considered revisions but are never flagged as such. For such interventions, a revision attribute is either not available at the rubric or a revision attribute is available at the rubric but is not applicable to a particular intervention within the rubric.

Interventions that are not considered revisions or that are not flagged as revisions are based on the fact that the return to the original operative site to perform a particular intervention is **not of interest** or is **not applicable** or would be **redundant**. That is, revisiting the site or redoing the intervention is something that is routinely performed and is not of interest for monitoring purposes; the intervention being performed is by its very nature not a revision — revision is not applicable; or the intervention being performed is by its very nature considered a revision — flagging as a revision is redundant.

## Key point

The revision attribute is available when the collection of this information is of interest. In most cases, the revision attribute will not be available for use where it is not of interest. However, due to the nature of any given rubric (includes more than one type of intervention), it may be available but exempt from use in some but not all circumstances.

**Example 1:** Replacement of nephrostomy tube

Reinsertion of stents, catheters and shunt systems **where they appear in rubrics for drainage** (1.^^.52) are not of interest because they are routinely performed. It is a reasonable expectation that these reinsertions will be performed and monitoring them is not of interest. The revision attribute is, therefore, not available at the rubric 1.PE.52.^^ *Drainage, renal pelvis*.

## Important note

The code assignment for revisions related to cerebrospinal fluid (CSF) shunt systems (including changing of catheters) is different. The coding standard *Revision of Cerebrospinal Fluid (CSF) Shunt Systems (Ventricle, Brain Stem, Spinal Canal)* outlines the code assignment for partial and complete revision of CSF shunt systems.

## Tip

"Stents" appear more often with the generic intervention "dilation" (1.^^.50) than "drainage" (1.^^.52). The rubrics for dilation (1.^^.50) may or may not have a revision attribute available.

**Example 2:** Lengthening of catheters associated with ventriculoperitoneal shunt

**Management** of an internal device (1.^^.54) always involves going back to the site of the original implant; thus it is redundant to capture these as revisions**.** The revision attribute is, therefore, not available at the rubric 1.AC.54.^^ *Management of internal device, ventricles of brain*.

**Example 3:** Control of bleeding of lung following lung resection using electrocautery

Methods of **controlling bleeding** that do **not** involve re-apposition (a second or subsequent bringing together of anatomical sites [for example, suturing]) are not flagged as revisions because they are not of interest from this point of view, as they are routinely performed (for control of bleeding) and are not complex interventions (e.g., packing, direct compression, electrocautery). The revision attribute is, therefore, not available at the rubric 1.GT.13.^^ *Control of bleeding, lung NEC*.

**Example 4:** Return to OR for local flap repair of lacerated bronchus following initial (unsuccessful) bronchorrhaphy

Methods of **controlling bleeding** that *do* involve re-apposition (a second or subsequent bringing together of anatomical sites [for example, suturing]) are of interest because they are not routinely performed (for control of bleeding) and are more complex interventions. The revision attribute is available at 1.GM.80.^^ *Repair, bronchus NEC* and is applied in this example.

**Example 5:** Return to OR for debridement of necrotic operative wound of chest wall

Interventions for managing **operative wounds** are not of interest. The revision attribute is available at 1.SZ.59.^^ *Destruction, soft tissue of the chest and abdomen* but is **not** applied in this example. Management of an operative wound is considered separate from the intervention that was performed. This is a complication of the wound and not a complication of the intervention that was performed via the incision.

**Example 6:** Return to OR for atticotomy for removal of recurrent cholesteatoma in postmastoidectomy cavity

A **second resection** at the same anatomic site is considered a new resection. The revision attribute is available at 1.DL.87.^^ *Excision partial, mastoid (process)* but is **not** applied in this example because this is not a revision (not applicable).

**Example 7:** Return to OR for removal and replacement of rejected skin allograft of arm

**Revisitation** of a previous operative site due to a problem is considered a revision. The revision attribute is available at 1.YT.80.^^ *Repair, skin of arm* and is applied in this example.

## Further resources

Refer to the coding standard *Revised Interventions* for a complete list of the types of interventions that are not classified as revisions and additional examples.

### c) Staged versus revised

Some interventions are deliberately completed over two or more intervention episodes for technical reasons and/or to achieve optimal success. A staged procedure is not a revision; it is one step in a series of steps to fully complete what is required and is classified using the status attribute “staged.”

### d) Use of revision attribute to denote replacement

The concept of “replacement” as a type of intervention does not exist in CCI. There is only provision to “implant” [1.^^.53], “manage” [1.^^.54] and “remove” [1.^^.55] a device.

The way that replacement of a device is captured using the revision attribute is to

- Assign the code for implant of the device; and
- Add the revision attribute.

Sometimes, there is an additional requirement to also code the removal of the device (because this is of interest), but most of the time there is not as this would be redundant (implant + revision = replacement [removed and implanted]).

**Example 1:** Do not assign a code for the removal

*“Replacement of intraocular lens prosthesis with the same type of prosthesis”*

To classify this intervention, **1)** select the code for the specific device that is (and was previously) implanted from 1.CL.53.^^ *Implantation of internal device, lens* (e.g., 1.CL.53.LA-LN for rigid posterior chamber lens). This includes the removal of the previous prosthesis and insertion of the new one. Then **2)** select the status attribute R *Revision*.

**Example 2:** Assign a code for the removal

*“Replacement of rigid posterior chamber lens prosthesis with folded posterior chamber prosthesis”*

To classify this intervention, **1)** select the code for the specific intervention that is performed from 1.CL.53.^^ *Implantation of internal device, lens* (i.e., 1.CL.53.LA-LM for folded posterior chamber lens); **2)** select the status attribute R *Revision*; and **3)** add the code for the removal of the rigid lens (1.CL.55.LA-LN *Removal of device, lens of rigid posterior chamber lens prosthesis using open approach*) per the note at 1.CL.53.^^: “If lens prosthesis is removed and replaced with a different type, then the removal (see 1.CL.55.^^) should be coded as well as the implantation of the different prosthesis.”

## Tip

In CCI, the terms “reinsertion” and “replacement” are used interchangeably to mean removal of a previous device with implantation of a new device. How and where the reinsertion/replacement of a device is captured depends on the nature of the device. Reinsertion/replacement of a drainage device (stent, catheter and shunt systems) is classified to 1.^^.**52 without** a revision attribute; reinsertion/replacement of most other types of devices is classified to 1.^^.**53 with** a revision attribute.

Exceptions to the above include replacement of internal device within an existing subcutaneous pocket (1.YY.54.^^ *Management of internal device, skin of surgically constructed sites*).

**e) Assigning the revision attribute**

To assist with the question of whether a revision attribute should be assigned, users may utilize the following steps:

- **Step 1:** Ask yourself, “Is this intervention taking place at the site of a previous intervention?” If yes, go to step 2. If no, stop.
- **Step 2:** Ask yourself, “Is this intervention taking place to address a problem with the earlier intervention? To redo the earlier intervention?” If yes to either, go to step 3; otherwise stop.
- **Step 3:** Ask yourself, “Is this particular situation an exception to assigning the revision attribute?” If yes, stop; if no, go to step 4.
- **Step 4:** Code the intervention that is currently being performed and assign the revision attribute.

# Knowledge checks

Complete the following knowledge checks and then review the answers in Appendix A. If you answered any questions incorrectly, it is recommended you go back and review the relevant information within this section.

**Question 1**

Choose T for true or F for false for the following statement:

**T** **F** A minimum of one attribute must be captured for every intervention that is coded from Section 1 — Therapeutic Interventions in CCI.

**Question 2**

Choose T for true or F for false for the following statement:

**T** **F** When an attribute box is inactive (grey), this means that no values may be entered in that field on the abstract.

**Question 3**

Choose T for true or F for false for the following statement:

**T** **F** If two attributes from the same active attribute box are applicable, both can be selected.

**Question 4**

Choose the one correct answer:

The description “the planned intervention of drainage of lung abscess was aborted when the patient developed an arrhythmia following administration of anesthesia” meets the criteria for a/an

- Abandoned intervention
- Cancelled intervention
- Change of plans
- Failed intervention

**Question 5**

Choose the one correct answer:

The following intervention would be flagged as “revision”:

- Irrigation of dialysis shunt (1.KY.54.^^ *Management of internal device, artery with vein*)
- Neurolysis median nerve (wrist) following previous repair of this nerve (1.BM.72.^^ *Release, nerve(s) of upper arm and elbow*)
- Reinsertion of nephrostomy tube for drainage (1.PE.52.^^ *Drainage, renal pelvis*)
- Stage 1 construction of external ear (1.DA.84.^^ *Construction or reconstruction, external ear NEC*)

# Chapter 4: Using CCI — Making use of the clinical record

## Chapter overview

This chapter introduces the clinical record as the source document used by coders to support coding interventions using CCI.

Coders become more expert with intervention coding as experience is gained with particular types of cases and the use of CCI. The clinical record is the source for coding morbidity data, and more specifically for coding interventions.

## Interpreting an operative report

Reading through an operative report can be challenging and at times overwhelming. The key to coding a complex operative report is to use a step-by-step approach whereby you break down the operative report into its key components and then, with the help of the classification and the coding standards, select the intervention codes that best capture the intervention(s) documented in the operative report.

The following step-by-step approach may prove useful when faced with a complex operative report.

#### Step 1: Orient yourself to the overall nature and purpose of the intervention

Prior to diving into the body of the operative report, begin by reviewing the surgeon's identification of the "Name of Operation" or "Title of Procedure" or "Procedure Performed" at the beginning of the report. Along with the pre-operative and post-operative diagnoses, this information helps to frame the overall intent of the intervention(s) and gives you a broad sense of what was done.

### Caution

Referring to the OR booking form for the name of the operation being performed may be misleading. The surgeon may use a specific intervention term or abbreviation (e.g., FESS [functional endoscopic sinus surgery]) because he or she wants the operating room set up and supplied a certain way (e.g., with a particular tray of instruments). But the actual intervention to be performed may be different than what is noted there.

## Important note

Coders must not rely solely on the list of interventions as named by the surgeon under the heading “Procedures Performed.” Everything that is listed may not require a separate code; conversely, additional codes may be needed to fully capture everything that was done during the intervention episode.

**Step 2: Identify the what, where and how**

The next step is to carefully read through the body of the operative report, paying special attention to keywords and phrases that you need to complete the intervention code. Make note of the terms that are used to describe **what was done** (an excision? a dilation? a repair?). Notice the key terms that indicate **which anatomy sites** were involved (bone? artery? which ones specifically?). Identifying the key components of the intervention aids in the selection of search terms to use in CCI. Keep in mind that some terms that are recorded will need to be switched to the generic terms that are used by CCI; for example, “lance” may pertain to incision or drainage.

Also make note of the keywords that describe **how the procedure was done**, that is, what approach was used (was it open? laparoscopic?) and what techniques or devices were used (sutures? mesh? screws?). This is also the time to note any terminology that is unfamiliar or for which you need to confirm the definition.

Along the way, you are also establishing whether additional procedures were performed that were not listed under the heading “Procedures Performed” and need to be coded. For example, was there an additional incision made to procure tissue to repair the surgical site defect?

Now that you have identified the what, where and how of the intervention(s) performed, the next step is to determine how the intervention is classified in CCI.

**Step 3: Locate the correct code(s) in CCI**

Before you can locate the correct code in CCI, you need to determine the search terms (the lead terms and secondary terms) that you will use in CCI. These usually correspond to the intervention and the anatomical site, for example, *repair nerve wrist*. Once you have identified these terms, use the query function in CCI to identify the options. There may be more than one rubric/code in CCI to carefully consider, so don’t stop at the first hit but review them all and narrow them down.

Once you have zeroed in on the possible rubrics, carefully check the inclusions/exclusions, instructions and notes at each of these rubrics in the tabular list. Don't forget to check these at the code level, rubric level and group level and at the beginning of the section. These notes either help to confirm that you are at the right rubric/code or help alert you to the fact that you need to change your selection. Once you have confirmed you are at the right rubric, select the appropriate qualifier(s) to complete the code. Then determine if there are any intervention attributes that need to be assigned.

## Caution

Ask yourself, "Do I really need all of the codes I have selected?" Refer to the coding standard *Multiple Codes in CCI*, where it states in part, "Not every action carried out during an intervention needs to be coded. Many smaller actions are carried out during an intervention episode that are an inherent part of an overall intervention and do not need to be coded separately. Additionally, the closure of the operative site is included in the intervention code." Be guided by the inclusions/exclusions, instructions and notes in CCI and the coding standards to help determine what does and does not require a separate code.

**Step 4: Confirm that everything has been accounted for**

Lastly, ask yourself, "Have I accounted for everything?" always keeping in mind the intent of the intervention and being guided by the classification and the coding standards.

# Appendices

# Appendix A: Answer key

## Section 2.1: Knowledge checks — CCI — Its structure and rules

### Question 1

**True:** This is a therapeutic intervention (Section 1), and for therapeutic interventions the group in field 2 of the CCI code represents the anatomy site group. The anatomy site group **PC** is the kidney.

1.**PC**.85.LA-XX-J *Transplant, **kidney** using living donor (allogenic or syngeneic) kidney*

### Question 2

**False:** An attribute is a data element that is collected separately from a completed CCI code. For example, an optional location attribute can be collected for the transplant code in question 1 to record that it was the left kidney that was transplanted.

1.PC.85.LA-XX-J *Transplant, kidney using living donor (allogenic or syngeneic) kidney* **PLUS** location attribute **L** *Left* recorded in the appropriate field on the abstract.

### Question 3

**False:** The term “and” in the rubric title means “and/or.” This rubric includes brachytherapy on the uterus only, brachytherapy on surrounding structures only and brachytherapy on the uterus and the surrounding structures.

### Question 4

The correct choices are **a), b)** and **c)**. Parentheses ( ) in CCI enclose supplementary terms, which may or may not be present, without affecting the code selection. Therefore, the endometrectomy in this example does not have to be accompanied by dilation to be classified to this rubric. The endometrectomy may be the only intervention (this can also be expressed as endometrectomy without dilation) or the endometrectomy may be accompanied by dilation.

### Question 5

The correct choice is **c)**. Removal of pacemaker electrodes from vagal nerve is included in this rubric. This rubric does not include removal of device for all nerves of the head and neck because the code title includes the abbreviation NEC (not elsewhere classified). This means that there may be another place(s) in the classification where removal of a device from specific nerves of the head and neck is classified, and only when this has been ruled out should this rubric be used. This rubric also does not include removal of intracranially implanted neurostimulator devices of the head. The exclusion directs the coder to another rubric for this intervention.

# Section 2.2: Knowledge checks — Using Folio Views

### Question 1

**True:** As there are more inclusions in the tabular list than in the alphabetical index in CCI, there is a better chance of locating the term that you are looking for if you search the tabular list first. The tabular list is searched first when you use the advanced query or tabular list query function.

### Question 2

**False:** If you use the Next Hit icon (or F4), Folio Views moves to the very next place that any of the search terms appear, stopping off at each line upon which they appear.

### Question 3

**True:** When you already know where you want to go within the tabular list, use the Go To icon (or Ctrl + G) to get directly to that location. Entering the characters of the code without punctuation gets you there more precisely.

### Question 4

**True:** The asterisk symbol can be used in CCI to replace parts of codes in order to find all possible values of interest for the search at hand. Using 1.AN.**, the search is performed to locate all of the different types of therapeutic interventions that are performed on the brain.

# Section 3.1: Knowledge checks — Field 1 — Section

### Question 1

**False:** The tabular list in CCI is subdivided into seven sections based on the general nature of the interventions in that section. The first character of a CCI code is a numeric value that corresponds to the section in CCI from which the code has been selected; for example, a value of **3** means that this is a diagnostic imaging intervention.

### Question 2

**False:** A skin biopsy is a diagnostic, not therapeutic, intervention. A code for skin biopsy is selected from Section 2 — Diagnostic Interventions, which includes interventions that assist in identifying the specific condition that requires treatment.

### Question 3

**False:** In this scenario, it is mandatory to code both the therapeutic intervention (removal of polyp) and the diagnostic intervention (colonoscopy).

### Question 4

The correct choice is **d)**. An intervention that is unique to the obstetric state is assigned a code from Section 5 — Obstetrical and Fetal Interventions.

# Section 3.2: Knowledge checks — Field 2 — Anatomy Site (Group)

### Question 1

**False:** The availability of more or less detailed anatomy site groups varies based on clinical relevance. What is relevant for therapeutic interventions may not be relevant for diagnostic or diagnostic imaging interventions. And what is relevant for one rubric within a section may not be relevant for another.

### Question 2

**False:** Whether a single intervention code or multiple codes are assigned for the same intervention performed on different anatomy sites depends on a number of variables. These include which sites are involved and whether they are all included in the available anatomy site groups for that intervention.

### Question 3

**True:** Closure of a fistula that communicates with the skin is classified to the internal anatomical site.

### Question 4

**True:** The term “and” means “and/or” for anatomy site groups; 1.TV.73.^^ *Reduction, radius and ulna* includes reduction of the radius alone, the ulna alone or the radius and ulna during the same intervention episode.

### Question 5

**False:** The resection of the shaft of the femur is classified to 1.VC.87.^^ *Excision partial, femur*, as the shaft (body) of the femur does not form part of the hip joint. *Tip*: Performing a search entering “shaft femur” will lead you to the rubrics for femur, not hip joint.

### Question 6

The correct choice is **b)**. Removal of aberrant (ectopic) tissue is classified to the anatomy site of origin.

### Question 7

The correct choice is **b)**. Anatomy site group OW is selected when an intervention is performed to asses or treat 1) an anastomosis at a surgically constructed site; 2) a stomal tract; or 3) a pouch in the digestive and biliary tract. However, the anatomy site group OW excludes the externalized opening at the skin surface of a stoma.

# Section 3.3: Knowledge checks — Field 3 — Intervention

### Question 1

**True:** Establishing intent pertains to matching up what you see described in the documentation to what was done as it relates to the generic interventions that are used in CCI. To translate the description into CCI terms, ask yourself, “What is the **plan or purpose** of the intervention being performed? What is the overall **intention** of the intervention being performed? What is the final desired **outcome or result**?”

### Question 2

**False:** *Drainage* (52) involves the removal of fluid such as water, blood or pus from a wound or part of the body to the outside of the body, usually by means of a tube. *Dilation* (50) involves the restoring of patency (i.e., open/unblocked state) of a body part to re-establish the normal flow of bodily fluids within the body.

### Question 3

**True:** When interventions are performed on bilateral sites and there is a variation in **any component** of the CCI code, multiple codes are assigned (+/- unilateral attribute). In this example, the variation is with the tissue qualifier — one side used synthetic tissue (mesh) and the other used no tissue. When the **exact same** intervention is performed on bilateral sites, a single code is assigned (+/- bilateral attribute).

### Question 4

The correct choice is **b)**. *Excision, radical* (91) is selected when a portion or the entire (usually) organ or body part and adjacent tissue is removed

# Section 3.4: Knowledge Checks — Field 4 — Qualifier 1: Approach/technique

**Question 1**

**True:** To be a complete CCI code, there must be a qualifier 1 included with the code. A complete CCI code consists of 7 to 10 characters. Qualifier 1 makes up the sixth and seventh characters of a CCI code.

**Question 2**

**False:** Qualifier 1 *usually* includes an operative approach, but it only sometimes includes the technique that was employed.

**Question 3**

**False:** A percutaneous approach may involve (very) small incisions to access the operative site.

**Question 4**

**False:** When more than one operative approach is used for the same intervention, only a single code with one of the available approach qualifiers can be assigned.

**Question 5**

**True:** A variety of ways are used to incorporate the technique for the intervention in the CCI code. One way is to include it in qualifier 1, but the technique may be included in qualifier 2 or by other means.

# Section 3.5: Knowledge checks — Field 5 — Qualifier 2: Agent or device

### Question 1

**True:** In sections 1, 2 and 5, qualifier 2 is used to capture either the device **or** the agent used during an intervention.

### Question 2

**False:** When qualifier 2 represents a device, it can apply to either a device that was used **to perform** an intervention or a device that was **left implanted**.

### Question 3

**False:** A K-wire is classified as either a pin or a wire depending on its use.

### Question 4

The correct choice is **c)** NV *pin, nail*. For orthopedic procedures, coders should follow the established hierarchy of devices. In this hierarchy, pins and nails take precedence over wire, mesh and staples.

# Section 3.6: Knowledge checks — Field 6 — Qualifier 3: Tissue

### Question 1

**False:** The tissue for a graft may come from various sources, including the patient, another person or an animal source.

### Question 2

**True:** The procurement of a portion of the intestine for use during surgery must always be captured.

### Question 3

The correct choice is **c)**. The tissue that is procured for a pedicled flap remains attached to the procurement site by a stalk that supplies the tissue with blood.

# Section 3.7: Knowledge checks — Attributes

### Question 1

**False:** Only mandatory attributes must be captured. These may be status attributes, location attributes or extent attributes and, while most of the mandatory attributes are from Section 1, there are a few from other sections in CCI.

### Question 2

**True:** An inactive (grey) attribute box means that there are no available attributes.

### Question 3

**False:** Only one of the available values in an attribute box may be selected.

### Question 4

The correct choice is **a)**. This therapeutic intervention (Section 1) had progressed beyond the preliminary stage of anesthesia, at which point it was terminated. The intended intervention was not attempted. The anesthesia is captured, mandatory. The drainage of lung abscess is optional to capture. If it is captured, the status attribute “abandoned” is assigned.

### Question 5

The correct choice is **b)**. The neurolysis required a revisit to the same anatomy site to resolve a problem (adhesions); management of a device (1. ^^.54) is by its very nature a revision (would be redundant); reinsertion of drainage devices assigned to 1.^^.52 are not of interest; and a staged procedure is not applicable (is not a revision).

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