Image Guidance –
Radiation Oncology Coding Standard

HCPCS Codes: 77014, 77387, 77417, G6001, G6002, and G6017

Original Date: April 2011
Last Review Date: November 2020
Last Revised Date: March 2024
Implementation Date: April 2024

Effective 2015 the American Medical Association (AMA) deleted CPT® codes 76950, 77421, and 0197T. The AMA replaced these codes with a new code, CPT® 77387. CPT® code 77387 includes all forms of image-guided radiation therapy (IGRT), including computed tomography (CT)-based IGRT (CPT® code 77014). Freestanding cancer centers (place of service 11) and physicians billing professionally only from a hospital outpatient department may bill temporary G codes (G6001, G6002, and G6017) established by Medicare to describe these services in addition to CPT® codes 76498, 77014, 77387, and 77417.

IGRT Allowed Billable Group HCPCS Codes: 77014, 77387, 77417, G6001, G6002, and G6017

Evolent reviews an "allowed billable group" of Healthcare Common Procedure Coding System (HCPCS) codes for image-guided radiation therapy. The treating physician is responsible for submitting the appropriate billing code(s) within an allowed billable group.

Cone-Beam Computed Tomography (CBCT) Image-Guided Radiation Therapy, IGRT (CPT® Code 77014)

Technical

For planning purposes, CPT® code 77014 involves a computed tomography (CT) scan wherein CT data are collected for dosimetry planning purposes. When performed and billed in addition to the initial simulation of the patient, the CT is considered an integral and bundled component of the simulation itself (CPT® codes 77280-77290). When performed on a separate day from the simulation or by a separate entity, a CT may be billable if:

- Images of the target volume or tumor localization data are acquired immediately prior to treatment.
- The data are fused and registered with the pretreatment data in the same treatment position by the radiation therapist.
- A radiation oncologist, medical physicist, or trained therapist under the supervision of the radiation oncologist reviews the data and the shifts.

- If necessary, the patient is repositioned for treatment delivery using the patient setup adjustments calculated from the registration process. Adjustments are performed by applying the offsets to the treatment position and verified.

CPT® code 77014 is used with CT-based systems (i.e., integrated cone-beam CT, CT/linear accelerator on rails, or TomoTherapy®). Physicians should bill for the professional ("-26") component of 77014 for cone-beam computed tomography (CBCT) image-guided radiation therapy (IGRT) (or use G6001 for ultrasound IGRT, G6002 for stereoscopic kV/MV X-ray IGRT, or G6017 for intra-fraction IGRT) for 2DCRT, 3DCRT, or IMRT. Some payers accept 77387-PC for IGRT. Review of images and shifts, e.g., for CBCT, should be performed and approved by the radiation oncologist prior to the patient's next treatment. Appropriate documentation could include a note in the patient's chart or a physician's electronic signature on the shifts/images. A unique daily note is not required.

77014 Computed tomography guidance for placement of radiation therapy fields

Standards for CPT® Code 77014

- CPT® code 77014 may be utilized for obtaining computerized tomography images for planning purposes when performed separate from the simulation procedure. This may occur at a separate facility or place of service or later during the treatment process to obtain new data for subsequent dosimetry planning to reduce volumes.

Image-Guided Radiation Therapy, IGRT (CPT® Code 77387)

Professional and Technical

CPT® code 77387 encompasses stereoscopic guidance, ultrasound guidance, CT-based guidance, MRI-based guidance and intrafraction tracking associated with guiding treatment to the appropriate area of the body. IGRT has a professional and a technical component and must be documented appropriately for each occurrence. However, the technical component of the IGRT service is considered bundled when performed on the same date of service as an IMRT treatment delivery (CPT® codes 77385 and 77386).

77387 Guidance for localization of target volume for delivery of radiation treatment delivery, includes intrafraction tracking, when performed

Standards for CPT® Code 77387

- CPT® code 77387 does not depend on the type of imaging used for IGRT. For example, it could be used for ultrasound, stereoscopic kV/MV X-ray, intra-fraction, cone-beam CT, or MRI IGRT

- One (1) IGRT procedure (CPT® code 77387) is allowed per external beam fraction of treatment
- CPT® code 77387 may be considered when using the following radiation therapy modalities:
    - Two-dimensional conventional radiation therapy (2DCRT) when precise target localization is medically necessary, for example, when the target is known to move with respect to external or bony landmarks. CPT® code 77387 is not medically necessary when superficial radiation therapy (which is a type of 2DCRT) is used to treat skin cancers or keloids
    - Three-dimensional conformal therapy (3DCRT)
    - Proton beam therapy (PBT)
- IGRT procedures including port images (CPT® Code 77417) are not billable on the same date of service, for the same treatment site.
- CPT® code 77387 did not receive an assigned reimbursement value in the Medicare Physician Fee Schedule (MPFS). Providers billing under Medicare were instructed to report IGRT services using the following CPT® code and Healthcare Common Procedure Coding System (HCPCS) G-codes:
    - 77014: Computed tomography guidance for placement of radiation therapy fields Please see the table below for an outline of IGRT reporting requirements regarding their application with the delivery of IMRT. It is extremely important to check with your payer before submitting claims, as requirements and policies vary by payer
    - G6001: Ultrasonic guidance for placement of radiation therapy fields
    - G6002: Stereoscopic X-ray guidance for localization of target volume for the delivery of radiation therapy
    - G6017: Intra-fraction localization and tracking of target or patient motion during delivery of radiation therapy (e.g., 3D positional tracking, gating, 3D surface tracking), each fraction of treatment

  When IGRT is performed with 2D or 3D treatment delivery, it is important to report the technical component of IGRT (77387-TC with hospital-based IGRT billing) separately for tracking purposes and non-HOPPS payers. Some payers accept 77387-26. If a payer does not accept 77387-26, then a physician bills G6001 for ultrasound IGRT, G6002 for stereoscopic kV/MV X-ray IGRT, G6017 for intra-fraction IGRT, or 77014-26 for cone-beam CT. It important for treating physicians to check with their payer before submitting claims, as requirements and policies vary by payer.

Port Images Image-Guided Radiation Therapy, IGRT (CPT® Code 77417)

Technical Only

77417 Therapeutic radiology port image(s)

Port images, previously called port films, are x-ray images taken on the treatment machine using the treatment beam to ensure that the treatment setup agrees with the setup parameters established by the simulation and dosimetry.

Port image verification is a technical component only procedure and does not carry a professional component. The technical component (i.e., costs associated with generating port images) is reportable in the non-facility or physician office/freestanding setting using CPT® code 77417. No modifier is required for these services. The physician orders port images to identify any potential variance from the planned course of therapy and utilizes the information to make necessary modifications that may be required to continue covering the tumor and minimize dose delivery to healthy tissue. Per Medicare policy, portal verification images may be reported as one charge per 5 fractions of radiation therapy, regardless of the number of images acquired, provided at least one image is taken.

Standards for CPT® Code 77417

- CPT® code 77417 may be billed once for each five fractions of therapy. For example, if there are 14 fractions of radiotherapy, then 2 units of CPT® code 77417 are approvable.
- CPT® code 77417 is billable as a quantity of one (1) for each five fractions of therapy, regardless of the number of port images acquired.
- Port images are not billable for brachytherapy, electron beam therapy, intra-operative radiation therapy (IORT), stereotactic body radiation therapy (SBRT), or stereotactic radiosurgery (SRS).
- Port images (CPT® code 77417) are not billable on the same date of service as a verification simulation (CPT® code 77280) or an IGRT procedure (CPT® code 77387) for the same site of treatment.

Ultrasound Image-Guided Radiation Therapy, IGRT (HCPCS Code G6001)

G6601 Ultrasonic guidance for placement of radiation therapy fields

Healthcare Common Procedural Coding System (HCPCS) code G6001 is used with ultrasonic guidance 2DCRT and 3DCRT. HCPCS code G6001 may be billed whenever trained personnel (e.g., a therapist or medical physicist) perform the procedure in the physician's office for ultrasound localization of the target volume under the supervision of the treating physician. In the hospital setting, under the Hospital Outpatient Prospective Payment System (HOPPS), the technical component is bundled with the delivery codes.

HCPCS code G6001 is not medically necessary when superficial radiation therapy (which is a type of 2DCRT) is used to treat skin cancers or keloids.

Stereoscopic X-Ray Guidance Image-Guided Radiation Therapy, IGRT (HCPCS Code G6002)

> **G6002** Stereoscopic X-ray guidance for localization of target volume for the delivery of radiation therapy

HCPCS code G6002 is used with stereoscopic X-ray-based systems (i.e., kV X-rays or MV X-rays with or without fiducial markers). HCPCS code G6002 can be used for imaging, localizing, and correcting target volume location immediately prior to 3DCRT or IMRT delivery. Locating the target volume on orthogonal X-rays with fiducial markers (when target volumes cannot be well seen on X-rays) or without them (if the target volume can be seen on X-rays or if bony anatomy can serve as a reliable secondary landmark) ensures accurate treatment of the target and sparing of normal tissues. The stereoscopic images must be fused and registered with the pretreatment digitally reconstructed radiographs (DRRs) and the required shifts calculated. Adjustments are then made to correct for this shift and are confirmed.

For both the physician office setting and the hospital outpatient department setting, HCPCS code G6002 should be reported. The code has a professional and a technical component.

Intra-Fraction Image-Guided Radiation Therapy, IGRT (HCPCS Code G6017)

> **G6017** Intra-fraction localization and tracking of target or patient motion during delivery of radiation therapy (e.g., 3-D positional tracking, gating, 3-D surface tracking), each fraction of treatment

HCPCS code G6017 is used with implanted radiofrequency transponders and for 3D positional tracking or surface tracking during delivery of radiation therapy for each fraction of treatment.

Sources:

The Coding Standards are created and maintained by Evolent based on our understanding of current:

- Healthcare Common Procedure Coding System (HCPCS) Level I (also known as Current Procedural Terminology (CPT®)) codes beginning with a number, HCPCS Level II codes beginning with a letter, and other information copyrighted by the American Medical Association (AMA). No fee schedules, basic units, relative values, or related listings are included in HCPCS Level I or II codes. AMA does not directly or indirectly practice medicine or dispense medical services.
- American Society for Radiation Oncology (ASTRO) Radiation Oncology Coding Resource
- Medicare's Local Coverage Determinations (LCDs) and National Coverage Determination (NCD) for radiation oncology
- Office of the Inspector General (OIG) compliance standards

- National Correct Coding Initiative (NCCI) edits
- National Correct Coding Initiative (NCCI) Policy Manual
- Centers for Medicare and Medicaid Services (CMS) Internet Only Manuals (IOM)