



CODING GUIDELINES

Radiation Therapy

Effective January 1, 2019





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CCI or NCCI (National Correct Coding Initiative) is an initiative taken by CMS. Per the CMS website, “The CMS developed the National Correct Coding Initiative (NCCI) to promote national correct coding methodologies and to control improper coding leading to inappropriate payment in Part B claims. The CMS developed its coding policies based on coding conventions defined in the American Medical Association's CPT Manual, national and local policies and edits, coding guidelines developed by national societies, analysis of standard medical and surgical practices, and a review of current coding practices.” “The purpose of the NCCI Procedure-to-Procedure (PTP) edits is to prevent improper payment when incorrect code combinations are reported.” “The purpose of the NCCI MUE program is to prevent improper payments when services are reported with incorrect units of service.”

The CCI and MUE edits are readily available on the CMS website so that providers and hospitals can stay informed and continually update their billing and coding practices to avoid any unnecessary denials.

eviCore adheres to the CMS CCI and MUE edits to control improper coding leading to inappropriate payment of claims. Since these edits are easily accessible on the CMS website, they are not covered in the eviCore coding guidelines.

eviCore Radiation Therapy Coding Guidelines

These guidelines summarize definitions and appropriate use of several CPT® codes. These guidelines are not meant to be all-inclusive, but are meant to be used in conjunction with the other coding resources and AMA Current Procedural Terminology (CPT) code book. The last section of the guidelines lists standard groups of codes that may be reimbursed for specific clinical cases. The presence of a code in a group does not guarantee approval of a claim for that code. Approval is based on clinically appropriate use of the code.

I. Individual Code Definitions

CPT® codes 77370 and 77470 are used to report the additional time and effort required when a medical physicist and radiation oncologist must plan for and deliver treatment under unusual clinical circumstances. Neither code should be billed routinely in connection with usual and customary services. Exceptions or additions to this guide will be made on a case-by-case basis with appropriate documentation.

A. 77470

The radiation oncologist bills 77470 when the complexity of the radiation therapy treatment plan is such that additional time and effort are required to deliver treatment effectively. Patient-specific documentation is required to substantiate the medical necessity of this code.

77470 may be medically necessary in treatment plans for which one or more of the following techniques are utilized.¹

1. Concurrent chemotherapy (not 30 days before or 30 days after, but concurrent with the radiation treatments – Herceptin® and hormonal therapy do not typically add additional work effort and are therefore not considered sufficient to qualify for reimbursement under this code)
2. Brachytherapy
3. Total body irradiation (TBI)
4. Hemi-body radiation
5. Per oral
6. Endocavitary irradiation
7. Pediatric patient requiring daily anesthesia and daily physician supervision
8. Hyperthermia
9. Cases requiring reconstruction of previous treatment plans; or combined dose effects of brachytherapy and external beam treatment
10. Radioimmunotherapy when combined with external beam treatment
11. Twice a day treatment (BID)

Procedures for which 77470 should not be billed include the following:

1. Contouring for three-dimensional conformal radiation therapy (3DCRT)
2. Contouring for intensity modulated radiation therapy (IMRT), even when multiple image sets are referenced

3. Reviewing a multi-phase plan when the physicist has done the work of summing the plans.
4. The work required for the 4DCT performed during simulation for treatment utilizing respiratory gating

Routine use of 77470 for standard breast cancer planning or standard prostate IMRT planning is not reimbursable.

Routine use of 77470 for SRS/SBRT or protons is not reimbursable

CPT® code 77470 is reported once per course of therapy.²

B. 77370

CPT® code 77370 is very similar to 77470 in that it documents additional work that is not routinely required for a radiation therapy episode of care. Billing for this code is also limited to unusual clinical situations, and is only appropriate for work performed by a board certified medical physicist. 77370 should not be applied to situations in which the physicist is performing quality assurance services. This code includes a technical component only.²

77370 may be medically necessary for treatment plans in which one or more of the following techniques or factors are present.³

1. Complex interrelationships of electron and photon ports. This code will not be reimbursed for an EBRT boost for breast cancer
2. Brachytherapy
3. Analysis of special devices and blocking to protect critical organs for treatment delivery that is not routinely required
4. Analysis of treatment areas that are abutting or overlapping with a previously treated area
5. Analysis of potential complications that a pregnant patient may experience as a result of treatment delivery
6. Fusion of three-dimensional image sets from multiple modalities, e.g., computerized tomography (CT), positron emission tomography (PET) and magnetic resonance imaging (MRI) (77370 should not separately be reported with IMRT planning code 77301, even when image fusion is done. The work effort for 77301 includes fusion of image sets)
7. Patient with a pacemaker/defibrillator/prosthesis within close proximity to treatment fields
8. Patient-specific treatment circumstances that require corrective measures to solve a discrepancy, correct a treatment error and ensure proper completion of treatment
9. Fusion and blending of multiple treatment plans including previously completed treatments for a specific patient circumstance
10. Radioimmunotherapy (for patients previously treated with external beam and an evaluation of a critical organ dose is required)

Procedures for which 77370 should not be billed include the following:

1. Verification of dose distribution and monitor units/dose accuracy for 3D/IMRT plans
Electron cutout measurements/dose measurements
2. In-vivo dosimetry
3. The work required for the 4DCT performed during simulation for treatment utilizing respiratory gating

CPT® code 77370 is not routinely reported for SRS/SBRT or protons.

CPT® code 77370 is reported once per course of therapy.

Use of this code requires a physician's request detailing what analysis should be performed, together with a custom report from the physicist specifically addressing items in the physician's request. Check-off sheets and repetitive templates are insufficient to serve as documentation of a customized special physics request.

Exceptions to this policy will be made on a case-by-case basis with appropriate supporting documentation. Evidence to substantiate an exception should be submitted when authorization is requested.

C. 77300

CPT® code 77300, basic radiation dosimetry calculation, is billed for a mathematical computation of the radiation dose at a particular point, a calculation related to source decay, or another independent calculation. Calculations are required for both external beam radiation therapy and brachytherapy and must be prescribed by the treating physician. Calculations are typically charged at a rate of one unit of CPT® code 77300 for each unique verification calculation (generally one per port, arc, path, or gantry angle). If treating breasts using multiple segments within each field (field in field), eviCore will approve up to 4 segments (4 units of 77300) per gantry angle for each unique field (see #11). The use of multiple segments for other treatment areas would be considered on a case-by-case basis. There must be a second algorithmic calculation that is separate and distinct from the isodose plan. The organs of interest or regions of interest are not reported as basic calculations but are considered to be included in the isodose plan. As of January 1, 2015, new CPT codes 77306, 77307, 77316, 77317 and 77318 along with 77321 include the work associated with the basic dosimetry calculation(s). As of January 1, 2016, new CPT codes 77767, 77768, 77770, 77771, 77772, 0394T and 0395T include the work associated with the basic dosimetry calculation(s).

77300 may be medically necessary for the following:⁴

1. Central axis depth dose
2. Time dose fractionation (TDF)
3. Nominal standard dose (NSD)

4. Gap calculation
5. Off axis factor
6. Tissue inhomogeneity factors
7. Calculation of non-ionizing radiation surface or depth dose
8. Assay to verify activity of an isotope and to determine the exact quantity to be administered
9. Calculation of the changes in source activity prior to each brachytherapy treatment (decay factor)
10. Calculation of thermal dose prior to each hyperthermia treatment
11. Verification for treatment of unique open or unique blocked fields or segments. Mirror image fields or segments at the same source axis difference (SAD) or source to skin difference (SSD) do not qualify for more than one calculation per unique field or segment.
12. Certain treatment techniques such as SBRT or SRS have a maximum of 10 units that can be billed

Procedures that exclude 77300 include the following:⁴

1. Gamma function quality assurance services
2. Verification of seed placement
3. Tracking cord dose
4. Tracking max dose
5. Multiple points of calculation within an isodose plan
6. Recalculation of previously determined dose points
7. Diode readings and variance calculations

Exceptions to this policy will be made on a case-by-case basis with appropriate documentation.

D. 77331

Special Dosimetry Code: 77331⁴ is used to document a dose at given point within a treatment field using special radiation equipment. The following rules apply:

1. If medically necessary, a measurement of a specific point is only reported once (per gantry angle) unless there are changes in the treatment affecting the measured point
2. Routine dosimetry measurements on all patients or fields are not allowed and are considered not medically necessary
3. The code may be used for unique considerations:
 - a. Measuring a dose at abutting or overlapping fields
 - b. Calibrating an electron mold
 - c. Confirming dose in a uniquely small field
 - d. Selected brachytherapy procedures
 - e. Documentation of dose under bolus
 - f. Measurement of critical organ dose such as eye (lens) when medically necessary

This measurement is intended to verify dose that is not part of the normal calculation of a treatment planning system or a treatment device calibration. It is not intended as a routine check or quality assurance for IMRT or other treatment plans.

The use of CPT® 77331 requires a specific physician order and evidence that the result was reviewed and signed by the physician. The ordering of more than six measurements will require specific documentation of an unusual medical necessity in a given case.

E. 77293⁵

Respiratory motion management simulation (List separately in addition to code for primary procedure) (Use 77293 in conjunction with 77295, 77301).

Code 77293 applies to a 4D CT data acquisition noting that a 4D scan is free-breathing. In these patients, the treatment area is not a static target, but rather the treatment area moves with continuous respiration, and therefore requires the acquisition of multiple data sets showing the respiratory motion. Because multiple scans are produced and fused with motion respiratory tracking, respiratory motion management provides precise mapping of the field and portal design defining the respiratory movement of the target tissue and the possible organs at risk. This code is not reported for CT registrations performed during inspiration, expiration and at rest. If the only breathing motion performed during simulation is DIBH (or any type of voluntary breath hold), this would not be reported with code 77293.

The work involved in +77293 includes physicians, therapists, dosimetrists and physicists and has both a professional and a technical component. The work is performed both in the simulator and in dosimetry. The add-on code +77293 is part of the simulation and isodose planning process, not part of treatment delivery. Additional codes such as 77470 and 77370 should not be reported for the same work process.

Complete documentation is essential when reporting an add-on code. Documentation should include both the medical necessity of reporting CPT® code +77293 as well as that the work the code describes was done. The documentation needs to be more extensive than just part of the simulation note since it is part of the isodose planning process. Physicians should work with their staff to ensure that proper documentation has been completed.

F. Teletherapy isodose plan complex 77307 and 3D treatment plan 77295.

It is appropriate to do a CT simulation, and contour the target and clinical structures for the purpose of creating blocks for either complex plans or 3D plans. 3D plans differ in that the process includes an analysis of dose options and variations within contoured structures, which have been reconstructed in 3D. This dose and volume analysis can be documented in the medical record

either in standard x and y axis format as a dose volume histogram (DVH), or in a more pictorial format as “dose clouds”. This analysis of dose and volume is what differentiates a complex plan from a 3D plan, and there must be medical necessity for doing this analysis. With today’s technology and with CT simulation, which is almost universal, it is a short path to go from contouring structures and rendering a 3D construction, to completing a dose-volume analysis. While it may seem like an arbitrary break point in terms of coding 77307 and 77295, the AMA for the time being still makes this distinction. To use whole brain RT for metastatic disease as an example, when we do a CT simulation, contour structures to draw blocks, use two (2) predetermined lateral fields and otherwise un-modulated 4 or 6 MV energies, a complex treatment plan is the correct billing code. We are left to decide whether a couple of segments (field-in-field) to “smooth out” hotspots is of any clinically meaningful significance and therefore justifies billing 3D. The current NCCTG N107C trial allows but does not require segments for the WBRT. eviCore does not consider segments medically necessary for the majority of WBRT cases, and therefore does not generally approve 3D treatment planning.

G. Computed tomography guidance for placement of radiation therapy fields (77014)⁶

Providers may not report CT guidance (77014) separately when reporting simulation services represented by codes 77280-77290 as CT guidance is now packaged into the simulation codes for both hospitals and freestanding centers. The same rule also applies to 3D conformal planning code 77295. Code 77014 is still the correct CPT code to report image guidance with kV or MV CT imaging in the Medicare Physician Fee Schedule (MPFS) setting.

H. IMRT planning code 77301⁷

Effective January 1, 2017, CMS issued updated guidance on the CPT codes that may be reported with 77301 *IMRT Treatment Planning* for developing an IMRT treatment plan. Payment for the services identified by CPT codes 77014, 77280, 77285, 77290, 77295, 77306, 77307, 77321, 77331, and 77370 are included in the payment for CPT code 77301 (IMRT planning). These codes should not be reported in addition to CPT code 77301 when provided prior to or as part of the development of the IMRT plan.

CPT code 77280 *Simulation aided field setting* should not be reported for verification of the treatment field during the entire course of IMRT.

CPT Code 77370 *Special Medical Radiation Physics Consultation* cannot be used for a QA or development of the treatment plan, including image fusion. There may be certain clinical scenarios where the physician will need a special physics consult AFTER the development of the plan.

- I. Stereotactic Radiosurgery (SRS)⁸
SRS codes, 77371 or 77372, are reported when all cranial lesions are treated in a single session as a complete course of treatment. Sequential single-fraction SRS for multiple synchronous metastases is not appropriate. If all lesions cannot be treated within a single fraction, the FSRT codes should be reported. If the intent is to treat three lesions separately but within the context of a single episode of care, then the appropriate codes would be 77373 for FSRT delivery, 77435 for FSRT physician management, and a single instance of 77295 for 3-D planning. If these are discrete episodes of care with separate consultation notes, separate CT scans, separate clinical treatment plans, and separate end-of-treatment notes, then 77372, 77432, and 77295 may be charged for each episode of care. All imaging is included in the SRS treatment delivery and physician management codes and not separately reported.
- J. Fractionated Stereotactic Radiotherapy (FSRT)^{8,9}
Treatments to the brain can be delivered over multiple sessions. This is known as Fractionated Stereotactic Radiation Therapy. For FSRT, the correct treatment delivery code is 77373 (all lesions included), up to a maximum of 5 fractions. The correct physician management code is 77435. All imaging is included in the FSRT treatment delivery and physician management codes and not separately reported. Some health plans may require the use of codes G0339 and G0340 in lieu of 77373.
- K. Stereotactic Body Radiation Therapy (SBRT)⁹
SBRT delivers treatment to areas outside the brain and can be given in 1 treatment or up to a maximum of 5 treatments. SBRT codes, 77373 for treatment delivery and 77435 for physician management, should only be reported when the entire episode of care does not exceed 5 fractions, and when SBRT is performed as a complete course of therapy. It is not appropriate to report SBRT codes as a boost or in conjunction with any other treatment technique. If member has 2 lung lesions (right lobe and left lobe), and the intent is to treat one lesion with 3 fractions of SBRT followed by another 3 fractions of SBRT for a total of 6 fractions, it is no longer considered SBRT and must be reported with 3D or IMRT treatment delivery codes. All imaging is included in the SBRT treatment delivery and physician management codes and not separately reported. Some health plans may require the use of codes G0339 and G0340 in lieu of 77373.
- L. Continuing Medical Physics Code 77336¹⁰
Weekly physics, code 77336, is reported with external beam radiation therapy or brachytherapy once per 5-fraction period, regardless of the actual time period in which services are provided. If the course combines EBRT and brachytherapy, each encounter will count as a fraction for the 5-fraction period, regardless of the duration between those fractions or the modality. Code 77336 may be billed once for a complete course of therapy only consisting of one or two fractions. Code 77336 is not reported when there is only a single fraction

in the brachytherapy course, such as a prostate seed implant.

M. Radiation Treatment Delivery, Superficial and/or Orthovoltage, per day (77401)¹¹

Beginning January 1, 2015, CPT code 77401 was revised to include codes 77261-77263, 77332-77334, 77306-77307, 77316-77318, 77336, 77427, 77431, 77432, 77435, 77469, 77470 and 77499. These codes cannot be reported separately with treatment delivery code 77401. Also, image guidance and tracking should not be billed with superficial or orthovoltage treatments as IGRT requirements for precise target localization are not met with this technique. For a course of superficial treatment, a single simulation code (77280-77290) may be reported for the initial set up of the field(s) and a single basic dosimetry calculation (77300) may be reported for the calculation of monitor units for each treatment field.

N. Adaptive Radiotherapy

Adaptive Radiotherapy is defined as changing the radiation therapy treatment plan delivered to a patient to account for significant changes in anatomy, such as tumor shrinkage, weight loss, swelling, etc. This is typically seen in head and neck cancers and lung cancers. When significant changes occur and new advanced imaging is necessary, a new planning code such as 77295 or 77301 may be warranted. There have been recent technological advances such as onboard magnetic resonance imaging (MRI) guided radiotherapy. This technology has facilitated the clinical implementation of online adaptive radiotherapy (OART), or the ability to alter the daily treatment plan based on tumor and anatomical changes in real-time while the patient is on the treatment table. There has been some guidance released in relation to possible codes that could apply, but CCI edits prevent them from being reported. Currently, there are no CPT codes associated with OART.

II. Frequently Requested Techniques and Associated CPT Codes

The following is meant to serve only as a general guide for when certain CPT/HCPCS codes **may** be indicated. The presence of a code in this list does not imply that it is medically necessary or guarantee that a claim for this code will be approved. Individual member clinical treatment requests vary and therefore the codes indicated below may or may not be applicable. Specific codes and frequency of the CPT/HCPCS code billing are subject to review for each clinical treatment request. Each case will be individually evaluated to determine the necessity of each claim.

Preparing for Treatment	Clinical Treatment Plan	77261, 77262, 77263
	Simulation	77280, 77285, 77290
	Immobilization Device	77332, 77333, 77334
	Respiratory Management	+77293
Dosimetry and Treatment Devices	Isodose Planning	77295, 77301, 77306, 77307, 77316, 77317, 77318, 77321
	Basic Dosimetry	77300
	Treatment Devices	77332, 77333, 77334, 77338
Verification	Imaging	77417, 77014, 77387, G6001, G6002, G6017
Radiation Treatment Delivery	Superficial/Orthovoltage	77401
	External Beam	77402, 77407, 77412, G6003, G6004, G6005, G6006, G6007, G6008, G6009, G6010, G6011, G6012, G6013, G6014
	IMRT	77385, 77386, G6015, G6016
	Protons	77520, 77522, 77523, 77525
	SRS	77371, 77372
	FSRT/SBRT	77373, G0339, G0340
	LDR	77761, 77762, 77763, 77778
	HDR	77767, 77768, 77770, 77771, 77772
	Electronic Brachytherapy	0394T, 0395T
	IORT	77424, 77425
Brachytherapy Surgical Procedure Codes	Placement Codes	19294, 19296, 19297, 19298, 31643, 32553, 41019, 49411, 49412, 55875, 55876, 55920, 57155, 57156, 58346
*Neurosurgeon Codes (depending on health plan)	SRS	61796, 61797, 61798, 61799, 61800 (*No one physician may bill both the neurosurgical codes 61796–61800 and the radiation oncology 77XXX codes.)
Special Codes	Special Dosimetry	77331
	Special Physics Consult	77370
	Special Treatment Procedure	77470

Physics	Continuing Physics	77336
Physician	Radiation Treatment Management	77427, 77431
	SRS Management	77432
	FSRT/SBRT Management	77435
	IORT Management	77469
Therapeutic Radiopharmaceuticals, Radioimmunotherapy and Microsphere Brachytherapy	SIRT	77778, S2095, C2616
	Xofigo	79101, A9606
	Lutetium	79101, A9513
	Zevalin	79403, A9543
	Iodine i-131 iobenguane	79101, C9408
	Iodine-131	79005
	Strontium-89	77750
Samarium-153	77750	

III. Crosswalk for Radiation Therapy Treatment Delivery and IGRT Codes

Freestanding	Hospital
77014*	77387*
G6001*	77387*
G6002*	77387*
G6003	77402
G6004	
G6005	
G6006	
G6007	77407
G6008	
G6009	
G6010	
G6011	77412
G6012	
G6013	
G6014	
G6015	77385 for breast and prostate 77386 for all others
G6016	77385 for compensator based IMRT
G6017*	77387*

*To report the physician work associated with image guidance when IGRT is authorized, attach modifier -26 to 77387, G6001, G6002, G6017 or 77014, depending on which image guidance service was provided, provider location and health plan requirements. Only one type of imaging is allowed per date of service. Please note that the technical component of IGRT is included in IMRT treatment delivery codes 77385 and 77386 and is not separately reported.

References

1. ASTRO Radiation Oncology Coding Resource (2018), pages 41-134
2. ASTRO Radiation Oncology Coding (2018), page 58
3. ASTRO Radiation Oncology Coding (2018), pages 59-76
4. ASTRO Radiation Oncology Coding (2018), pages 50-132
5. ASTRO Radiation Oncology Coding (2018), pages 47-48
6. ASTRO Radiation Oncology Coding (2018), pages 11, 42, 45, 75
7. ASTRO Radiation Oncology Coding (2018), page 75
8. ASTRO Radiation Oncology Coding (2018), pages 88-92
9. ASTRO Radiation Oncology Coding (2018), pages 93-97
10. ASTRO Radiation Oncology Coding (2018), pages 30, 58-60, 128
11. ASTRO Radiation Oncology Coding (2018), pages 64-67

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