

# *Procedure Coding for Radiation Oncology*

**Audio Seminar/Webinar**  
*October 1, 2009*

***Practical Tools for Seminar Learning***

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The faculty has reported no vested interests or disclosures regarding this presentation.

## Faculty

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### **Susan Ciastko, RHIT, CCS-P**

Susan Ciastko is the billing manager for the Department of Radiation Oncology at Loyola University Medical Center in Chicago, IL. Ms. Ciastko has 12 years of experience, including surgical coding and reimbursement, and trauma registry. She is a breast cancer survivor herself, having completed treatment earlier this year.

### **Neil A. Das Gupta, MD**

Neil A. Das Gupta is currently with Fox Valley Radiation Oncology in Fox Valley, IL. Dr. Das Gupta was instrumental in helping create the first radiation oncology program in the northern Illinois region to utilize both intensity modulated radiation therapy (IMRT) and image-guided radiation therapy (IGRT). He also started a stereotactic radiosurgery program in the area, and is a member of the American Society of Therapeutic Radiology and Oncology.

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## *Program Objectives*



- ◆ Provide clinical information as it relates to treatments in Radiation Oncology
- ◆ CPT® guidelines for therapeutic radiation services
- ◆ CCI edits and modifier usage

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## *Radiation Oncology*

- ◆ Not diagnostic Radiology
- ◆ Primary (neoadjuvant) or in addition to surgery & chemotherapy (adjuvant)
- ◆ Intent may be curative, palliative or prophylactic
- ◆ External beam and/or brachytherapy

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## ***Radiation Oncology Basics***

- ◆ **60% of cancer patients**
  - 33% palliative
  - 66% curative
- ◆ **Most patients already diagnosed**
- ◆ **Average length of treatment 5 weeks**
  - Can vary from a single fraction to 8+ weeks of daily therapy
- ◆ **Most treated in adjuvant or neoadjuvant setting**

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## ***External Beam Radiation (EBRT)***

- ◆ **2D or 3D conformal**
- ◆ **Intensity Modulated Radiotherapy (IMRT)**
- ◆ **Stereotactic Radiosurgery (SRS)**
- ◆ **Stereotactic Body Radiotherapy (SBRT)**
- ◆ **Usually given daily over several weeks**

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## ***Brachytherapy***

- ◆ Radiation delivered from within the body
- ◆ High Dose Rate (HDR)
- ◆ Low Dose Rate (LDR)
- ◆ Given alone or in conjunction with EBRT
- ◆ Delivered in 3-5 treatments
- ◆ Mammosite BID over 5 days

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## ***Diagnostic Coding***

- ◆ Site treated current course of therapy
- ◆ Highest level of specificity
  - Avoid .9 codes if at all possible
  - Don't use Category 195 as primary diagnosis
  - Don't use primary codes for metastasis
  - Don't use symptom codes
- ◆ **V58.0** primary for hospital charges
- ◆ Follow payor guidelines
  - Specify which diagnoses covered each modality

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## ***Medical Necessity Documentation***

- ◆ Reason patient is being treated
- ◆ Type(s) of radiation to be used this course of treatment
- ◆ Reasons why this patient requires this specific type of treatment
  - Detailed, patient specific – no generalities
  - Use dosage comparisons 3D vs. IMRT, etc. to specify critical structures in treatment area

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## ***Insurance Requirements***

- ◆ Payors increasingly require precertification/prior notification before treatment begins
  - All modalities (Humana)
  - IMRT (UHC)
  - SRS/SBRT & brachytherapy (Cigna)
  - SRS/SBRT (Aetna)
- ◆ Know your payor mix
  - Coverage determinations for RT
  - Precertification requirements

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### ***CMS Proposed Rules for 2010***

- ◆ **Consults eliminated**
- ◆ **Higher reimbursement for primary care services**
- ◆ **20% fee cut for specialty services**
- ◆ **Lower reimbursement with new patient E/M codes**

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### ***Professional and Technical Charge Components***

- ◆ **Professional/physician only**
  - Clinical treatment planning
  - Treatment management
- ◆ **Technical/hospital only**
  - Treatment delivery
  - Physics consult & continuing review
- ◆ **Combined charges**
  - Devices, basic dosimetry calculations, isodose plans
  - Require either TC or 26 modifier

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## ***Radiation Oncology CCI Edit Basics***

- ◆ **More done on same day, charges lost**
  - E/M lost if other procedures done
  - Imaging, port checks lost if planning done same day
- ◆ **Simple, intermediate level codes bundled into complex codes**
- ◆ **IMRT Isodose Planning (CPT® 77301) includes most other planning codes**

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## ***A Word About Denials***

- ◆ **Always appeal denials – no appeal, no chance for payment**
- ◆ **IMRT most denied type of radiation**
- ◆ **Common “denial” – requesting documentation before payment**

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## ***Polling Question #1***



**Do you regularly appeal denials?**

**\*1 Yes**

**\*2 No**

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## ***Radiation Therapy Process***

- ◆ **Each treatment course same basic process:**
  - Initial evaluation & decision to treat
  - Simulation, imaging & immobilization device(s) creation
  - Prescription & Target Delineation
  - Treatment planning
  - Block check prior to treatment start
  - Treatment delivery & management
  - Treatment Verification (QA)
  - Follow up care
- ◆ **Timeframe can vary from one day to weeks**
- ◆ **Billable charges for each step**

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## ***Initial Evaluation/Consultation***

- ◆ **Not really a diagnostic specialty**
- ◆ **Review of prior records**
- ◆ **History Intake**
- ◆ **Physical Exam**
- ◆ **Recommendations**
- ◆ **Informed Consent**

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## ***Initial Evaluation/Consultation Billing & Documentation***

- ◆ **Office or inpatient hospital visit**
- ◆ **E/M documentation guidelines**
- ◆ **Appropriate level E/M code**
- ◆ **Recommended treatment plan**
  - **Specific area to be treated**
  - **Number of treatments/fractions**
  - **Modality**
  - **Approximate total Gy dosage**
- ◆ **Separate planning note**

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***Initial Simulation***

- ◆ **Placement of fiducial markers**
  - 10-15% of patients
  - Generally done by other specialist
- ◆ **Creation of an immobilization device**
  - Critical step for reproducibility
  - Variety of different types
    - Custom molding (alpha cradle)
    - Reinforced plastic mask
    - Frameless skull fixation

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***Initial Simulation***

- ◆ **Image acquisition: radiation oncology**
  - kV x-rays (old-school)
  - CT scan
  - Respiratory gating
- ◆ **Image acquisition: radiology**
  - MRI (brain, abdomen)
  - PET (H&N, lung)

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***Initial Imaging***

- ◆ **Basis of planning**
- ◆ **Done with patient in treatment position**
- ◆ **Simulator in department or in diagnostic Radiology**
- ◆ **CPT® 77011 CT guidance stereotactic localization**
- ◆ **CPT® 77014 CT guidance placement of radiation therapy fields**

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***Initial Imaging***

- ◆ **CPT® 76950 Ultrasonic guidance for placement of radiation therapy fields**
- ◆ **Image guidance packaged for hospital for Medicare, but still reported**
- ◆ **MRI or PET scans may be fused to CT or US images**
  - **No separate code for fusion**
- ◆ **No separate code as yet for 4D CT**

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## ***Immobilization Devices***

- ◆ **Assure patient in same position for each treatment**
- ◆ **Hospital bills each device created (technical component)**
- ◆ **Physician bills only the highest complexity level device (professional component)**
- ◆ **Pillows, cushions, etc. not billed**

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## ***Treatment Device Codes***

- ◆ **CPT® 77332 Treatment devices, design and construction; simple (simple block, simple bolus)**
- ◆ **CPT® 77333 Treatment devices, design and construction; intermediate (multiple blocks, stents, bite blocks, special bolus)**
- ◆ **CPT® 77334 Treatment devices, design and construction; complex (irregular blocks, special shields, compensators, wedges, molds or casts)**
  - **Must be single use, customized to patient**

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***Initial Simulation  
Billing & Documentation***

- ◆ Level of complexity determined by the number of treatment sites, ports and devices used, not time involved
- ◆ Patient in prescribed treatment position
- ◆ Targeting markers/tattoos placed

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***Simulation Codes***

- ◆ **CPT® 77280** Simulation-aided field setting; simple
  - Single treatment volume
  - Simple or parallel opposed ports
  - Simple or no blocking
- ◆ **CPT® 77285** Simulation-aided field setting; intermediate
  - Three or more converging ports
  - Two separate treatment volumes
  - Multiple blocks

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## ***Simulation Codes***

- ◆ **CPT® 77290 Simulation-aided field setting; complex**
  - Three or more treatment areas
  - Complex blocking
  - Use of contrast material
  - Tangential ports and multiple devices
  - Customized immobilization devices

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## ***Documentation Required***

- ◆ **Procedural note describing entire process**
  - Imaging done, devices created and/or used, use of any contrast
- ◆ **Printed or electronic copies of imaging**
- ◆ **Proof of image review by physician including signature and date**
- ◆ **Photos**

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## ***Image Fusion***

- ◆ **Dosimetrist fuses images from simulation (CT scan) with previously acquired diagnostic imaging**
- ◆ **Not necessary for all patients**
  - MRI (brain)
  - PET (H&N, Lung, Lymphoma)
- ◆ **Prior to delineating any targets, the radiation oncologist must review and approve the fusion**

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## ***Target Delineation***

- ◆ **Perhaps the most critical step for a radiation oncologist**
- ◆ **Using acquired images and superimposed fused ones, the structures of interest are outlined**
  - Tumor itself
  - Lymph nodes
  - Clinically determined areas at risk
  - Surrounding critical structures
  - Done (for CT) on every pertinent slice

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## ***Prescription***

- ◆ **Prior to planning the treatment, the radiation oncologist must write the radiation prescription**
- ◆ **Determination of radiation dose to specific targets within the treatment volume**
  - GTV (gross tumor volume)
  - CTV (clinical target volume)
  - PTV (planning target volume)
  - ITV (inspiratory target volume)
  - Critical structures (lung, heart, spinal cord, etc.)
- ◆ **Made based on clinical experience and evidence-based medicine**

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## ***Planning: General Principles***

- ◆ **After target delineation is complete and the prescription is written, dosimetrists and physicists generate a plan**
  - Generally, numerous plans are created conforming to the prescription
  - Physician will weigh merits/demerits of each plan
    - Target coverage
    - Critical structure doses
  - Physician may make suggestions or call for additional plans
  - When content, physician approves a plan for treatment

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***Planning:  
Radiation Delivery Methods***

- ◆ **Numerous methods of radiation delivery exist**
  - 2D isocentric treatment
  - 3D conformal radiation therapy
  - IMRT
    - Standard 5/7/9/11 field
    - Rapid Arc
    - Tomotherapy
  - Brachytherapy
  - Stereotactic Radiosurgery (SRS/SBRT)
    - LINAC-based
    - Gamma knife
    - Cyberknife

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***Planning:  
Radiation Delivery Methods***

- ◆ **Method of radiation delivery is generally chosen by the dosimetrist in their attempt to create the best possible plan**
- ◆ **Physician will occasionally request a specific modality for various reasons**
- ◆ **Most radiation centers do not have the capability to offer all of the aforementioned modalities**
- ◆ **The treatment method selected has major coding and reimbursement implications**

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## ***Simple Clinical Treatment Planning***

- ◆ **CPT® 77261**
  - EBRT only
  - Single treatment area
  - Single or simple ports
  - No devices or simple, non-customized device(s)
  - No specialized tests

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## ***Intermediate Clinical Treatment Planning***

- ◆ **CPT® 77262**
  - Special testing
  - EBRT sole modality
  - Three or more converging ports, two separate treatment areas
  - Special dose and/or time requirements
  - Multiple generic devices

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## ***Complex Clinical Treatment Planning***

- ◆ **CPT® 77263**
  - Specialized tests
  - EBRT given with other types of treatment
    - Brachytherapy, hyperthermia, concurrent chemo
  - 3D conformal, IMRT, SRS/SBRT
  - Special dose and/or time requirements
  - Three or more treatment areas
  - Rotational or special beam considerations
  - Use of electrons, neutrons or protons

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## ***Teletherapy Isodose Plans***

- ◆ Used for EBRT only
- ◆ Determines radiation dose to tumor & surrounding tissues
- ◆ Hand or computer calculated
- ◆ Normally billed one time per course of treatment to same treatment area(s)
- ◆ Additional plans billable only IF:
  - New imaging set
  - Significant changes in dose, target volume, treatment fields, patient anatomy

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## *Simple Isodose Planning*

- ◆ **CPT® 77305**
  - One or two parallel opposed, unmodified ports
  - Single treatment area

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## *Intermediate Isodose Planning*

- ◆ **CPT® 77310**
  - Three or more ports
  - Single treatment area
  - Simple or no blocking

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## ***Complex Isodose Planning***

- ◆ **CPT® 77315**
  - Mantle or inverted Y
  - Tangential ports
  - Five or more ports
  - One treatment area
  - Wedges, compensators
  - Complex, custom blocking

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## ***3D Conformal Planning***

- ◆ **CPT® 77295**
  - 3D reconstruction of tumor volume
  - Dose volume histogram
  - Critical structures in close proximity to treatment volume
  - Treatment volume only defined by MRI or CT
  - Multiple or conformal ports, close margins required to protect critical structures
  - Same or immediately adjacent area already irradiated
  - Beam's eye view required for conformal treatment delivery

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## ***Intensity Modulated Isodose Planning***

- ◆ **CPT® 77301**
  - Varied beam intensity
  - Inverse planning required
  - MLC or similar required for beam modulation
  - Three critical structures must be protected
  - CT/MRI based 3D reconstruction
  - Dose volume histograms required

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## ***Basic Dosimetry Calculations***

- ◆ **CPT® 77300** Basic radiation dosimetry calculation, central axis depth dose calculation, TDF, NSD, gap calculation, off axis factor, tissue inhomogeneity factors, calculation of non-ionizing radiation surface and depth dose, as required during course of treatment, only when prescribed by the treating physician
- ◆ Billed per port/monitor unit/dose calc
- ◆ IMRT billed per angle/path
- ◆ Identical calculation ports billed as 1 unit
- ◆ Billed for additional fields added, significant changes/recalculations after treatment start

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## ***Beam Shaping Treatment Devices***

- ◆ Shape, modify radiation beam
- ◆ Simple, intermediate or complex
- ◆ Technical/hospital - each device used
- ◆ Professional/physician - highest level device used per port
- ◆ Mirrored, identical, opposed ports (AP/PA, RLAT/LLAT) billed as one professional device charge

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## ***Beam Shaping Treatment Devices***

- ◆ CPT® **77332** Simple
  - Simple block, simple bolus
- ◆ CPT® **77333** Intermediate
  - Multiple blocks, stents, bite blocks, special bolus
- ◆ CPT® **77334** Complex
  - Irregular blocks, complex MLC, special shields, compensators, wedges, molds or casts
  - Must be customized to the patient

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***Billing Multiple Units of  
CPT® 77300 and 77334***

- ♦ Payor requirements may vary for physician and hospital billing
  - Line item vs. single line, unit quantity
- ♦ For line item billing, payors may require modifier 76 rather than modifier 59

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***Special Treatment Procedure***

- ♦ **CPT® 77470**
  - Billed only once per total course of treatment
  - Extra physician work involved for certain patients
    - TBI, hemibody irradiation, concurrent chemo, etc.
  - Not to be billed if patient has other medical conditions like diabetes, COPD, etc.
  - Separate detailed, patient specific written report required for documentation

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## ***Treatment Planning Documentation***

- ◆ **Computer generated treatment plan**
- ◆ **Approved, dated and signed by physician**
- ◆ **Billed on print date for paper chart**
- ◆ **Billed on date of electronic signature in paperless environment**

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## ***Special Dosimetry Calculation***

- ◆ **CPT® 77331**
  - **Special radiation dose measurement**
  - **Not required for most patients**
  - **Must have medical necessity completely documented in patient record**

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### ***Special Physics Consult***

- ◆ **Special physics consult on a specific treatment issue**
  - TBI, SRS, HDR, IMRT, multiple fields, etc.
- ◆ **Done only by physicist, not dosimetrist**
- ◆ **Must be ordered by treating physician**
- ◆ **Written analysis reported back to physician**
- ◆ **Must contain dated signatures from both the physicist and physician**

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### ***Pretreatment Verification (QA)***

- ◆ **All treatments must be verified for accuracy prior to delivery**
- ◆ **Physics QA (dry run on phantom)**
- ◆ **Preport imaging**
  - Checks patient positioning
  - Verifies patient immobilization
  - Depicts custom block/MLC shaping

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## ***Pretreatment Verification Billing & Documentation***

- ◆ **Billed as simple simulation (CPT®  
77280)**
- ◆ **Written procedural report**

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## ***Image Guided Radiotherapy (IGRT)***

- ◆ **Increasingly used nationwide**
- ◆ **Image guidance for daily 3D or IMRT treatment delivery**
  - **Primarily used for brain, lung, liver, pancreatic, gyne, prostate tumors**
- ◆ **Allows for much more precise therapy**
- ◆ **Direct visual targeting before daily treatment start**
- ◆ **Specialized equipment required**
- ◆ **Cone beam CT or Kv films**
- ◆ **Not regular port films**

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## ***On Treatment Verification***

- ♦ **Portal Imaging**
- ♦ **Low voltage x-ray films are taken**
  - Weekly for palliative/simple cases
  - Daily for IGRT cases
- ♦ **Films reviewed by physician and compared to pre-treatment films to assess accuracy**
- ♦ **NOT intended to assess treatment response**

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## ***Treatment Management***

- ♦ **During radiation, patient is seen by the physician at least once every five treatments**
  - Generally, this is on a weekly basis
  - Can be bi-weekly for hyperfractionation
- ♦ **This OTV (on treatment visit) is when a physical exam is performed, side effects are managed, patient questions are answered, etc.**
- ♦ **OTV notes documented, but generally not dictated**

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## ***Physician Clinical Treatment Planning***

- ◆ **Covers period from initial visit through beginning of treatment**
- ◆ **Management of entire planning process**
- ◆ **Billed one time for entire course of treatment**
  - **Includes multiple treatment sites, modalities same course of treatment**

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## ***Treatment Delivery***

- ◆ **Billed for each treatment delivered**
- ◆ **Determined by two factors**
  - **Energy level (in megavolts)**
  - **Complexity of treatment**
- ◆ **Only one treatment billed per day**
- ◆ **Multiple areas, different modalities or energies, bill only the highest level**
- ◆ **BID treatments must have distinct sessions separated by several hours (8 am & 2 pm for example)**
  - **Modifier 59 on second treatment of each day**
- ◆ **Detailed hand written or computerized log of each treatment given**

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### ***EBRT Treatment Delivery Codes***

- ♦ All Kv, superficial and/or ortho voltage  
– CPT® **77401**
- ♦ Simple – Single, parallel ports, no or simple devices
  - CPT® **77402**  $\leq 5$  MeV
  - CPT® **77403** 6-10 MeV
  - CPT® **77404** 11-19 MeV
  - CPT® **77405**  $\geq 20$  MeV

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### ***EBRT Treatment Delivery Codes***

- ♦ Intermediate – Two separate treatment areas, three or more ports to a single area, multiple non-complex devices
  - CPT® **77407** -  $\leq 5$  MeV
  - CPT® **77408** - 6-10 MeV
  - CPT® **77409** - 11-19 MeV
  - CPT® **77410** -  $\geq 20$  MeV

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### ***EBRT Treatment Delivery Codes***

- ♦ **Complex** - Three or more treatment areas, custom device, rotational beam, compensators, electron beam, tangential ports
  - CPT® **77412** -  $\leq$  5 MeV
  - CPT® **77413** - 6-10 MeV
  - CPT® **77414** - 11-19 MeV
  - CPT® **77416** -  $\geq$  20 MeV

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### ***IMRT Treatment Delivery***

- ♦ CPT® **77418** - IMRT delivery, single or multiple fields/arcs, via narrow spatially & temporally modulated beams, binary, dynamic MLC, per treatment session
- ♦ **0073T** Compensator-based beam modulation treatment delivery of inverse planned treatment using 3 or more high resolution (milled or cast) compensator convergent beam modulated fields, per treatment session
- ♦ Billed for delivery only if CPT® **77301** is used for treatment planning

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***Polling Question #2***



**A patient is receiving daily IMRT treatment to a primary site followed by a conventional radiation treatment to bony pelvic metastasis. Are both treatments billable?**

**\*1 Yes**

**\*2 No**

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***Respiratory Gating Billing***

- ♦ **0197T** 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
- ♦ **Adjustment for motion of internal organs during breathing**
- ♦ **No Category I CPT® code as yet**

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## ***IGRT Billing & Documentation Required***

- ◆ CPT® **77421** Stereoscopic x-ray guidance for localization of target volume for the delivery of radiation therapy
- ◆ Physician and technical components
- ◆ Technical component packaged for hospital Medicare patients, but still reportable
- ◆ Included in stereotactic delivery codes – do not bill separately
- ◆ Physician Supervision level changed in July, 2009 from level 3 to level 2
- ◆ Physician review & approval still recommended prior to “beam on” each day
- ◆ Targeting films must be part of patient record showing date and time of review by physician

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## ***Radiation Port Films***

- ◆ CPT® **77417** Therapeutic radiology port film(s)
- ◆ Code description includes multiple films
- ◆ Port parameter reverification
- ◆ Done weekly for each treatment port
- ◆ If done in conjunction with IGRT, port film not billable
- ◆ Technical only charge – physician review included in treatment management
- ◆ Only one charge billable per day
- ◆ Payors may only reimburse one per week
- ◆ Packaged, but still reportable for Medicare patients

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## ***Continuing Medical Physics Review***

- ◆ **CPT® 77336**
- ◆ **Physicist assessment of physics of treatment delivery**
  - Chart review, patient setup, treatment details, verification of dose delivered, etc.
- ◆ **Required QA review for treatment accuracy**
- ◆ **Done once every five fractions or on specified day per week**
- ◆ **Total charges can't exceed total number of fractions divided by five**
- ◆ **Patient must receive at least five fractions before charge is billable**
- ◆ **Can't be billed on same day as special physics consult**

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## ***Treatment Management Billing & Documentation***

- ◆ **CPT® 77427 or CPT® 77431 for 1-2 fractions of treatment**
- ◆ **Regular treatment management billed once every five fractions**
- ◆ **Patient must receive at least five fractions before billable**
- ◆ **Billed for EBRT only**
- ◆ **Physical exam & evaluation by physician must be done within date range of each five fractions**
- ◆ **Physical assessment & evaluation must be clearly documented in patient chart to be billable**
- ◆ **Includes review of port films, treatment parameters, dose delivery, & patient setup**

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***Polling Question #3***



**If patient receives 27 fractions of EBRT, 5 units of CPT® 77427 and 77336 are billable.**

- \*1 True**
- \*2 False**

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***Stereotactic Treatment***

- ◆ Must be delivered in 1-5 fractions of treatment**
- ◆ Image guided**
- ◆ Highly precise method of delivery**
- ◆ Higher doses of radiation to tumor while reducing dosage to surrounding tissue**
- ◆ Done in single fraction (cranial lesions) or 1-5 fractions (cranial & certain other extracranial/body lesions)**
- ◆ Single fraction cranial SRS done in conjunction with neurosurgeon**

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## *Stereotactic Delivery*

- ◆ **Bill G codes for hospital Medicare patients**
  - **G0173** Linear accelerator based SRS, complete course of treatment in one session (cranial lesions)
  - **G0251** Linear accelerator based SRS delivery including collimator changes & custom plugging, fractionated treatment, all lesions, per session, maximum 5 sessions per course of treatment

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## *Stereotactic Delivery Codes*

- **G0339** Image guided robotic linear accelerator-based SRS, complete course of therapy in one session, or first session of fractionated treatment
- **G0340** Image guided robotic linear accelerator-based SRS, delivery including collimator changes and custom plugging, fractionated treatment, all lesions, per session, second through fifth sessions, maximum 5 sessions per course of treatment

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### ***Stereotactic Delivery Codes***

- ♦ All other non-Medicare patients bill CPT® codes
- ♦ CPT® **77371** Radiation treatment delivery, SRS, complete course of treatment of cranial lesion(s) consisting of 1 session; multi-source Cobalt 60 based
- ♦ CPT® **77372** Radiation treatment delivery, SRS, complete course of treatment of cranial lesion(s) consisting of 1 session; linear accelerator based

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### ***Stereotactic Delivery Codes***

- ♦ CPT® **77373** Stereotactic body radiation therapy (SBRT), treatment delivery, per fraction to 1 or more lesions, including image guidance, entire course not to exceed 5 fractions

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## ***Stereotactic Treatment Management***

- ◆ **CPT® 77432** Management single fraction course of treatment to cranial lesion(s)
- ◆ **CPT® 77435** Management course of treatment to body lesion(s), total course of treatment not to exceed 5 fractions
- ◆ Do not bill **CPT® 77427** or **77431** with SRS/SBRT management codes

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## ***Brachytherapy***

- ◆ Radiation delivered by sealed radioactive element (seeds or sources)
- ◆ Implanted temporarily or permanently
- ◆ LDR or HDR
- ◆ Surface, interstitial, or intracavitary
- ◆ Multiple charges per treatment

74

## ***Brachytherapy Planning***

- ◆ Professional treatment planning billed only if not immediately proceeded by EBRT
- ◆ Separate set of isodose plan codes
- ◆ Isodose planning may be billed per treatment if medically necessary, documented
- ◆ Codes based on complexity determined by sources or ribbons

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## ***Brachytherapy Isodose Planning Codes***

- ◆ CPT® **77326** Simple, 1-4 sources/ribbons, remote afterloading 1-8 sources
- ◆ CPT® **77327** Intermediate, 5-10 sources/ribbons, remote afterloading 9-12 sources
- ◆ CPT® **77328** Complex, more than 10 sources/ribbons, remote afterloading over 12 sources

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## ***Planning Documentation***

- ♦ **Printed computer plan including physician & physicist dated signatures (dated & timed electronic signatures if paperless charting)**

77

## ***Brachytherapy Treatment Delivery***

- ♦ **Multiple codes rather than single treatment delivery code per session**
- ♦ **Radiation source plus device used for insertion into the body**
- ♦ **Application of radiation source (LDR)**
- ♦ **Remote afterloading of radiation source (HDR)**

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## ***LDR Application Codes***

- ♦ **Intracavitary application**
  - CPT® **77761** Simple, 1-4 sources
  - CPT® **77762** Intermediate, 5-10 sources
  - CPT® **77763** Complex,  $\geq$  11 sources
- ♦ **Interstitial application**
  - CPT® **77776** Simple, 1-4 sources
  - CPT® **77777** Intermediate, 5-10 sources
  - CPT® **77778** Complex,  $\geq$  11 sources
- ♦ **Surface application**
  - CPT® **77789**
- ♦ **Billed for each treatment session**
- ♦ **Payors may require modifier 76 after initial session**

79

## ***Radiation Supervision & Handling***

- ♦ **CPT® 77790**
  - Handling & loading of radiation source in manual loading LDR
  - Preparation of seeds for prostate implant
  - Documentation of source receipt, handling & processing

80

## ***Simulations***

- ◆ Done for planning/initial treatment & reverification checks before subsequent treatment sessions
- ◆ CPT® **77290** for initial/planning
- ◆ CPT® **77280** for reverification subsequent sessions

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## ***LDR Catheter Insertion Codes***

- ◆ CPT® **19296-19298**
- ◆ CPT® **20555** Muscle and/or soft tissue
- ◆ CPT® **31643** Lung
- ◆ CPT® **41019** Head & neck (transoral or transnasal)
- ◆ CPT® **55875** Prostate
- ◆ CPT® **55920** Pelvic organs/genitalia (excludes prostate)

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### ***HDR Remote Afterloading Codes***

- ◆ Codes changed January, 2009
  - CPT® **77785** 1 channel
  - CPT® **77786** 2-12 channels
  - CPT® **77787** > 12 channels
  - CPT® **77781-77784** deleted
- ◆ Based on number of channels rather than ribbons or sources
- ◆ Billed for each treatment session
- ◆ Global period changed to XXX, but modifier 76 may still be required by payors after initial treatment session

83

### ***GYNE HDR Insertion***

- ◆ CPT® **57155** Insertion of uterine tandem/ovoids
- ◆ Billed per treatment session
- ◆ Requires modifier 58 after initial treatment session

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## ***Radiation Sources***

- ◆ **HCPCS supply codes**
- ◆ **Billed for each treatment session**
- ◆ **Technical only charge**

85

## ***LDR Charge Examples***

- ◆ **Initial Treatment planning (usually done prior to 1<sup>st</sup> session of treatment)**
  - Professional clinical planning
  - Isodose plan
  - Complex simulation
  - Special treatment procedure
  - Special physics consult
- ◆ **Per treatment session**
  - Application
  - Radiation source
  - Isodose plan if done
  - Simple reverification simulation
  - Basic dosimetry calculation
- ◆ **Continuing physics review done after session 3**

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## ***HDR Charge Examples***

- ♦ **Initial Treatment planning (usually done prior to 1<sup>st</sup> session of treatment)**
  - Professional clinical planning
  - Isodose plan
  - Complex simulation
  - Special treatment procedure
  - Special physics consult
- ♦ **Per treatment session**
  - Insertion code
  - Radiation source
  - Remote afterloading
  - Isodose plan if done
  - Simple reverification simulation
  - Basic dosimetry calculation
- ♦ **Continuing physics review done after session 3**

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## ***Documentation Per Treatment Session***

- ♦ **Physician written procedural report**
- ♦ **Printed computerized brachy isodose plan**

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## ***Treatment Completion or Radiosurgery Summary***

- ◆ **Written summation of all treatment given, patient condition during & after treatment, any side effects/complications and their management during current course of treatment**
- ◆ **Rad Onc version of a discharge summary**

89

## ***Follow Up***

- ◆ **After treatment is complete, patients are generally followed by the treating physician**
  - **Variable frequency depending upon physician determination**
  - **Patients generally followed by other specialty physicians as well**
  - **Primary purpose is to screen for disease recurrence and manage any long-term radiation related side effects**

90

### ***Follow Up Care Billing***

- ◆ Routine follow up care, including management of radiation side effects, non-billable for first 90 days after treatment completion
- ◆ E/M documentation guidelines
- ◆ E/M code level based on documentation and place of service

91

### ***Sample External Beam Patient***

- ◆ 75 y.o. WM with 80 pk-yr history developed SOB and hemoptysis
- ◆ CXR revealed RUL lung mass
- ◆ CT showed RUL mass with hilar and mediastinal LN, no distant metastasis
- ◆ Medical Oncologist recommended concomitant chemo/XRT

92

## ***Sample External Beam Patient***

### **◆ Consultation**

- Long discussion with patient and family regarding potential side effects of therapy
- After weighing risks/benefits, radiation oncologist feels patient is a candidate for definitive chemo/XRT
- Patient agrees to proceed with treatment

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## ***Sample External Beam Patient***

### **◆ Simulation**

- Immobilization device created (alpha cradle)
- CT scan obtained (with or without contrast) in the treatment position
- Respiratory gating used at the time of simulation
- Skin tattoos placed
- PET scan in treatment position obtained two days later in radiology dept.

94

## ***Sample External Beam Patient***

- ◆ **Target delineation**
  - Dosimetrist imports recent PET scan and fuses this image with the CT image done at the time of simulation
    - Physician checks and approves the fusion
  - Dosimetrist combines respiratory gated scans into an average scan
  - Physician then contours the various targets and avoidance structures on the new image set

95

## ***Sample External Beam Patient***

- ◆ **Prescription**
  - In accordance with standard therapy, physician prescribes 6300 cGy in 35 fractions
- ◆ **Planning**
  - Numerous plans are generated, including 3D-CRT and IMRT plans
  - Physician analyzes each plan and makes recommendations for improvement
  - Eventually physician approves a plan

96

***Sample External Beam Patient***

- ◆ **Treatment verification**
  - On day 1, an image set is generated on the table prior to administering therapy (pre-ports)
  - These images are verified and compared to simulation images by therapist and physician
    - Minor shifts/adjustments can be made, after which the patient is re-imaged
  - Eventually, physician approves for treatment

97

***Sample External Beam Patient***

- ◆ **Treatment Management**
  - During therapy, patient is seen to discuss any side effects, manage other medical issues, view pertinent images
- ◆ **Follow Up**
  - Patient seen 1 month afterwards to assess response, manage side effects

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## ***Sources For More Information***

- ◆ Professional societies (ASTRO, ACRO, SATRO, SROA)
  - Annual meetings
  - Billing and coding guides
  - Listserves or chat groups
- ◆ Radiation Oncology specific seminars and webinars

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## ***Resource/Reference List***

- ◆ The ASTRO/ACRO Guide to Radiation Oncology Coding 2007 and 2008 Supplement  
[http://www.astro.org/HealthPolicy/RadiationOncologyCoding/ASTRO\\_or\\_ACRGuideToRadiationOncology/](http://www.astro.org/HealthPolicy/RadiationOncologyCoding/ASTRO_or_ACRGuideToRadiationOncology/)
- ◆ ACRO Practice Management Guide 2007 Billing and Coding Update  
<http://acro.org/>
- ◆ American Medical Association CPT® codes and definitions 2009  
<http://www.ama-assn.org/>

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CE Certificate Instructions	

## Appendix

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### Resource/Reference List

[http://www.astro.org/HealthPolicy/RadiationOncologyCoding/ASTRO\\_or\\_ACRGuideToRadiationOncology/](http://www.astro.org/HealthPolicy/RadiationOncologyCoding/ASTRO_or_ACRGuideToRadiationOncology/)

<http://acro.org/>

<http://www.ama-assn.org/>

## ***Sample Brachytherapy Patient***

- ♦ **46 y.o AAF with a suspicious screening mammogram**
  - Stellate 1.8 cm mass in the UOQ of R breast
  - Positive family history
  - Non-palpable mass
- ♦ **U/S guided biopsy positive for IDCA, grade 2**
  - ER/PR +, Her-2 neu –
- ♦ **Surgical consult**
  - Recommends lumpectomy +/- placement of a balloon catheter for brachytherapy
- ♦ **Medical Oncology consult**
  - Determination for chemotherapy made after surgery

1

## ***Sample Brachytherapy Patient***

- ♦ **Consultation**
  - Patient is a candidate for partial breast irradiation using balloon brachytherapy
    - Meets all criteria for partial breast irradiation
    - Risks/benefits of the procedure and all alternatives discussed with patient at length
    - Patient wishes to proceed
- ♦ **Patient then undergoes lumpectomy and placement of catheter**
  - 1.6 cm IDCA, grade 2 removed
  - Clear margins, closest >1cm
  - Sentinel lymph nodes negative (0/2)

2

## ***Sample Brachytherapy Patient***

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### **♦ Simulation**

- Planning films are taken with the treatment catheter in place and balloon inflated
- No specific immobilization is necessary

### **♦ Target Delineation**

- Entirety of the balloon is contoured and adjustments to treatment volume made (skin distance, etc.)

3

## ***Sample Brachytherapy Patient***

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### **♦ Prescription**

- Physician determines appropriate radiation dose based upon recommended guidelines
- Prescribes 3.4 Gy x 10 fractions BID

### **♦ Planning**

- Single catheter high dose rate (HDR) brachytherapy using Ir-192 wire

### **♦ Treatment verification**

- Prior to every administration, a 2D simulation film is taken to verify balloon size, shape, position, etc.

4

## ***Sample Brachytherapy Patient***

- ♦ **Treatment Management**
  - During therapy, patient is seen to discuss any side effects, manage other medical issues, view pertinent images
- ♦ **Follow Up**
  - Patient referred to medical oncology
  - Given appointment for first appointment in 2 weeks

5

## ***Sample Radiosurgery Patient***

- ♦ 62 y.o. WF with history of stage III breast CA treated 3 years ago presents with headache
- ♦ MRI reveals solitary 2.1 cm brain metastasis
- ♦ PET scan shows no other evidence of distant disease
- ♦ Seen by neurosurgeon, who does not think surgery is advisable given location of tumor

6



## ***Sample Radiosurgery Patient***

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### **♦ Consultation**

- Physician feels that patient is an excellent candidate for SRS (stereotactic radiosurgery)
- Discusses logistics and side effects of procedure
- Patient informed about neurosurgeon role in procedure
- Agrees to therapy

7

## ***Sample Radiosurgery Patient***

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### **♦ Simulation**

- Less than one week from procedure date, patient undergoes MRI of the brain in radiology (neutral head position)
- On day of procedure, neurosurgeon places rigid fixation device onto skull
- Patient then has CT scan in radiation oncology

8

## ***Sample Radiosurgery Patient***

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- ♦ **Target delineation**
  - Dosimetrist fuses recent MRI to planning CT scan
  - Radiation oncologist (incorporating neurosurgeon input) contours targets
    - Tumor
    - Critical surrounding tissues

9

## ***Sample Radiosurgery Patient***

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- ♦ **Prescription**
  - Physician prescribes 1800 cGy in a single fraction
- ♦ **Planning**
  - Dosimetrist/Physicist create multi-arc IMRT based stereotactic treatment plan
  - Plan is modified as necessary and finally approved by physician

10

## ***Sample Radiosurgery Patient***

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- ♦ **Treatment verification**
  - Pre-port images are taken to assure precise matching with simulation images
  - Physician clears patient for therapy
- ♦ **Treatment management**
  - Physician bills a management charge for a single fraction stereotactic treatment
- ♦ **Follow up**
  - Patient seen in one week to assess tolerance of therapy, and in 4-6 weeks with imaging to assess response



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