# Case Log User Guide
# Radiation Oncology

## Contents

# Introduction

The ACGME Case Log System is a HIPAA-compliant, online database that allows residents to efficiently document their clinical experience. It also provides the Review Committee for Radiation Oncology a uniform mechanism for verifying the clinical experience of all residents in ACGME-accredited radiation oncology programs.

This guide for residents and program directors outlines how to ensure that the Case Log System contains accurate data reflecting clinical experience. It includes an overview of the procedure minimums required by the Review Committee, gives detailed instructions for entering cases and provides answers to frequently asked questions related to the documentation of clinical experience.

# Procedure Minimums

## *Background*

The Review Committee requires residents to log a minimum number of particular case types and procedures. The minimums indicate the acceptable minimal level of procedural experience that residents are expected to have throughout the course of the educational program. The minimum numbers are not a final target, and residents must log cases even after the minimums are met. This gives the Review Committee an accurate portrait of resident clinical volume and variety, as well as evidence related to the quality of the program's procedural education and training. Further, meeting the minimum procedural targets does not necessarily indicate competence and does not replace the need for additional procedural experience outlined in the Program Requirements and/or deemed necessary by the program, nor does it replace the need for a summative evaluation to ensure that a resident is capable of entering into practice without direct supervision.

## *Overview of Procedure Minimums*

The radiation oncology procedure minimums are outlined in Tables 1 and 2 below and are found in Program Requirements IV.C.5.-IV.C.9.b) in the *ACGME Program Requirements for Graduate Medical Education in Radiation Oncology,* effective July 1, 2022. As part of the ACGME accreditation process, the Review Committee regularly reviews Case Log data to confirm compliance with these requirements. While the procedure minimums in the tables below are currently in effect, review the "Case Log Requirements by Graduating Class" document to determine which revised minimums will be enforced for graduates in a particular academic year.

In the tables below, note the differences among "simulations," "procedures," and "patients." If the minimum indicates simulation or procedure, a given patient may undergo multiple simulations or procedures by one resident. If a minimum indicates patients, that procedure must be performed on a particular number of unique patients. Note that Table 1 outlines the procedural requirements for non-Holman Pathway residents, and Table 2 outlines the procedural requirements for Holman Pathway residents.

See the section "Guidance for Logging Particular Procedural Categories" for more detailed information about the procedural categories.

See Appendix A for a table containing the procedures that are included in each minimums category.

### *Table 1: Case Minimums for Non-Holman Pathway Residents*

| Procedural Category | Minimum Number Required | Number of Allowed Observed Cases | Additional Guidance Outlined in the Program Requirements |
|---|---|---|---|
| External Beam Radiation Therapy | **450** simulations | N/A | No more than **350** performed in one year (Detail Program Requirement) |
| - Bone Sarcoma/Soft Tissue Sarcoma | **5** simulations | **2** simulations | |
| - Breast: Post-Mastectomy | **11** simulations | **3** simulations | |
| - Central Nervous System | **19** simulations | **5** simulations | |
| - Head and Neck Subtotal (Intact, Post-Operative, Skin) | **41** simulations | **10** simulations | |
| - Esophagus | **5** simulations | **2** simulations | |
| - Anorectal (Anus, Rectum) | **10** simulations | **3** simulations | |
| - Non-Prostate Genitourinary (Bladder, Testes, Other) | **3** simulations | **2** simulations | |
| - Gynecologic Subtotal (Cervix Intact, Cervix Post-Hysterectomy, Uterus, Other) | **10** simulations | **3** simulations | |
| - Lymphoma (Hodgkins Lymphoma and Non-Hodgkins Lymphoma) | **8** simulations | **2** simulations | |
| - Non-Small Cell Lung Cancer | **16** simulations | **4** simulations | |
| Brachytherapy Interstitial | **7** procedures | N/A | |
| Brachytherapy Intracavitary | **15** procedures | N/A | • **5** must be tandem-based insertions for at least **2** patients<br>• No more than **5** should be cylinder insertions |
| Pediatric Patients | **12** patients | N/A | Including at least **9** patients with solid tumors |
| Intracranial Stereotactic Radiosurgery (SRS-Brain) | **20** patients | N/A | |
| Stereotactic Body Radiation Therapy (SBRT) | **20** patients | N/A | To the liver, lung, spine, or other extracranial sites |
| Radioimmunotherapy, Other Targeted Therapeutic Radiopharmaceuticals, or Unsealed Sources | **8** procedures | N/A | |
| - I-131 | **3** procedures | N/A | Oral administration of I-131 with administered activity equal to or in excess of 1.22 Gigabecquerels (33 mCi) |
| - Parenteral Administration | **5** cases | N/A | Parenteral administration of any alpha emitter, beta emitter, mixed emission, or a photon-emitting radionuclide with a photon energy less than 150 keV, for which a written directive is required, and/or parenteral administration of any other radionuclide, for which a written directive is required |

### *Table 2: Case Minimums for Holman Pathway Residents*

| Procedural Category | Minimum Number Required | Number of Allowed Observed Cases | Additional Guidance Outlined in the Program Requirements |
|---|---|---|---|
| External Beam Radiation Therapy | **350** simulations | N/A | No more than **350** performed in one year (Detail Program Requirement) |
| - Bone Sarcoma/Soft Tissue Sarcoma | **4** simulations | **2** simulations | |
| - Breast: Post-Mastectomy | **8** simulations | **2** simulations | |
| - Central Nervous System | **14** simulations | **4** simulations | |
| - Head and Neck Subtotal (Intact, Post-Operative, Skin) | **31** simulations | **8** simulations | |
| - Esophagus | **4** simulations | **2** simulations | |
| - Anorectal (Anus, Rectum) | **8** simulations | **2** simulations | |
| - Non-Prostate Genitourinary (Bladder, Testes, Other) | **2** simulations | **2** simulations | |
| - Gynecologic Subtotal (Cervix Intact, Cervix Post-Hysterectomy, Uterus, Other) | **8** simulations | **2** simulations | |
| - Lymphoma (Hodgkins Lymphoma and Non-Hodgkins Lymphoma) | **6** simulations | **2** simulations | |
| - Non-Small Cell Lung Cancer | **12** simulations | **3** simulations | |
| Brachytherapy Interstitial | **7** procedures | N/A | |
| Brachytherapy Intracavitary | **15** procedures | N/A | • **5** must be tandem-based insertions for at least **2** patients<br>• No more than **5** should be cylinder insertions |
| Pediatric Patients | **12** patients | N/A | Including at least **9** patients with solid tumors |
| Intracranial Stereotactic Radiosurgery (SRS-Brain) | **20** patients | N/A | |
| Stereotactic Body Radiation Therapy (SBRT) | **20** patients | N/A | To the liver, lung, spine, or other extracranial sites |
| Radioimmunotherapy, Other Targeted Therapeutic Radiopharmaceuticals, or Unsealed Sources | **8** procedures | N/A | |
| - I-131 | **3** procedures | N/A | Oral administration of I-131 with administered activity equal to or in excess of 1.22 Gigabecquerels (33 mCi) |
| - Parenteral Administration | **5** cases | N/A | Parenteral administration of any alpha emitter, beta emitter, mixed emission, or a photon-emitting radionuclide with a photon energy less than 150 keV, for which a written directive is required, and/or parenteral administration of any other radionuclide, for which a written directive is required |

## Accessing the Case Log System

1. Go to https://apps.acgme.org/connect.
2. Enter the username and password used to log into the ACGME Accreditation Data System (ADS). Usernames and passwords are assigned and emailed to residents when the program first enters them into ADS. Residents are required to change the assigned password the first time they log into the system.
3. After logging in, the user is directed to the “Add Cases” screen.

## Entering a Case

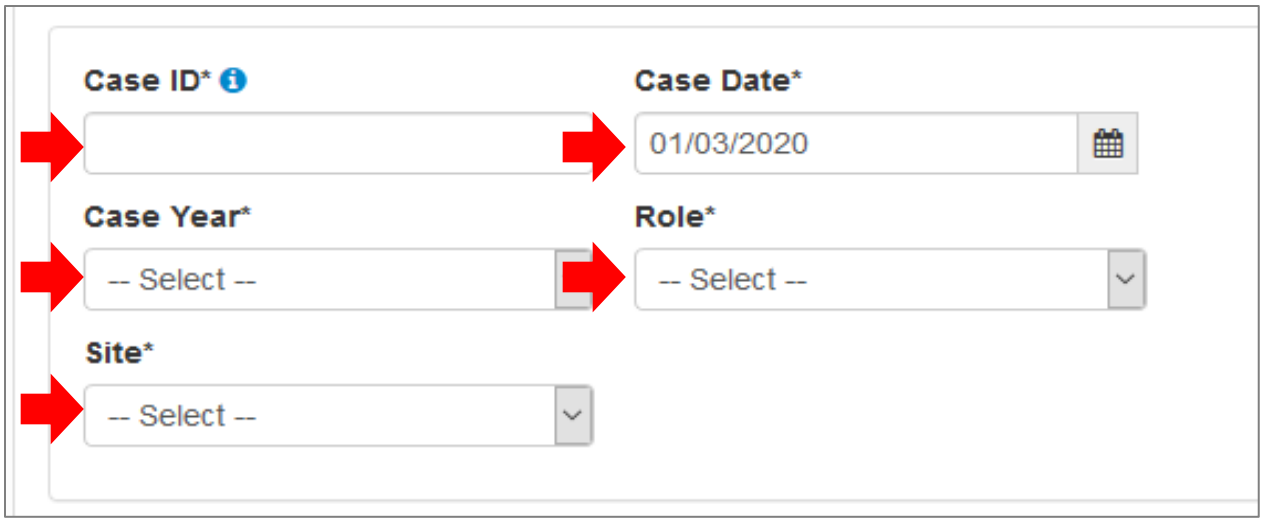
Residents are responsible for entering their case data accurately and in a timely manner. As internet access is not always reliable or available, it is recommended that a written record is kept of all cases/procedures performed until that information can be entered into the Case Log System.

Program directors have view-only access to their program’s resident Case Log data and review it on a regular basis.

The remainder of this section provides step-by-step instructions for entering a case in the Case Log System.

### *Entering Basic Information*

All cases require the following information (described in detail below): Case ID; Case Date; Case Year; Role; and Site.




**Case ID:** The Case ID is a unique identifier for each case that does not contain patient identifiable information, such as patient name or Social Security number. Ask the program director if the program uses a particular naming convention for Case IDs.

**Case Date**: The Case Date refers to the date the patient was seen and the procedure was performed. A date can be entered directly in the field, or click on the calendar icon to select the date.

**Case Year:** The Case Year is the residency year (1-4) during which the case was observed or performed. The system will autofill the resident’s current year in the program. If the patient

encounter occurred in a prior year of the program, select the correct year from the drop-down menu to override the autofill.

**Role:** Indicate whether the case was observed or performed. Only cases performed will count toward the minimum requirements with the exception of the new External Beam Radiation Therapy (EBRT) disease site minimums, of which a portion of observed cases can count toward the minimums (see pages 8-9).

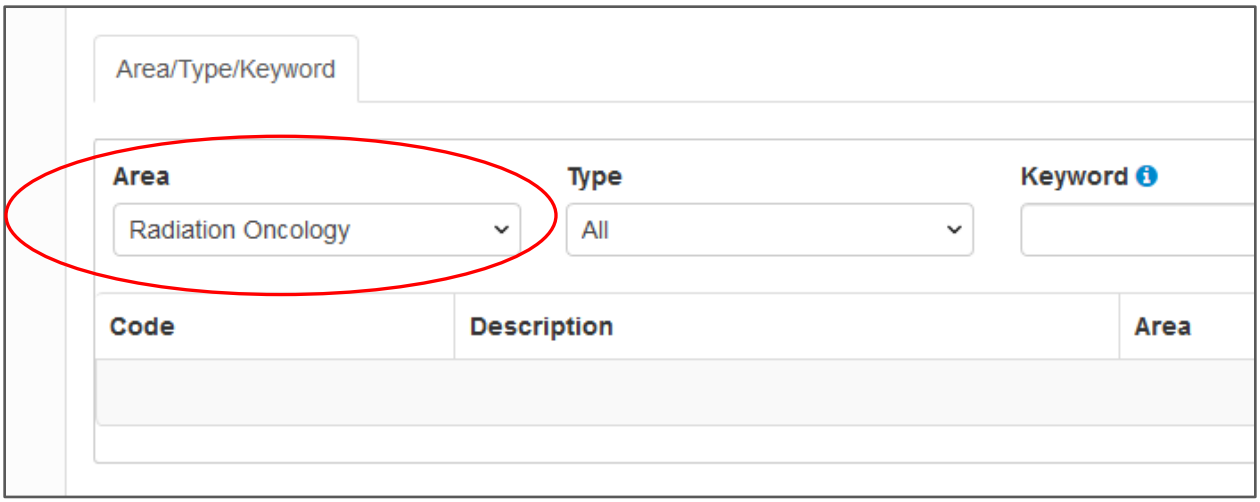
**Site:** The Site indicates the physical location (e.g., hospital) at which the case was observed or performed.

### *Entering Comments*

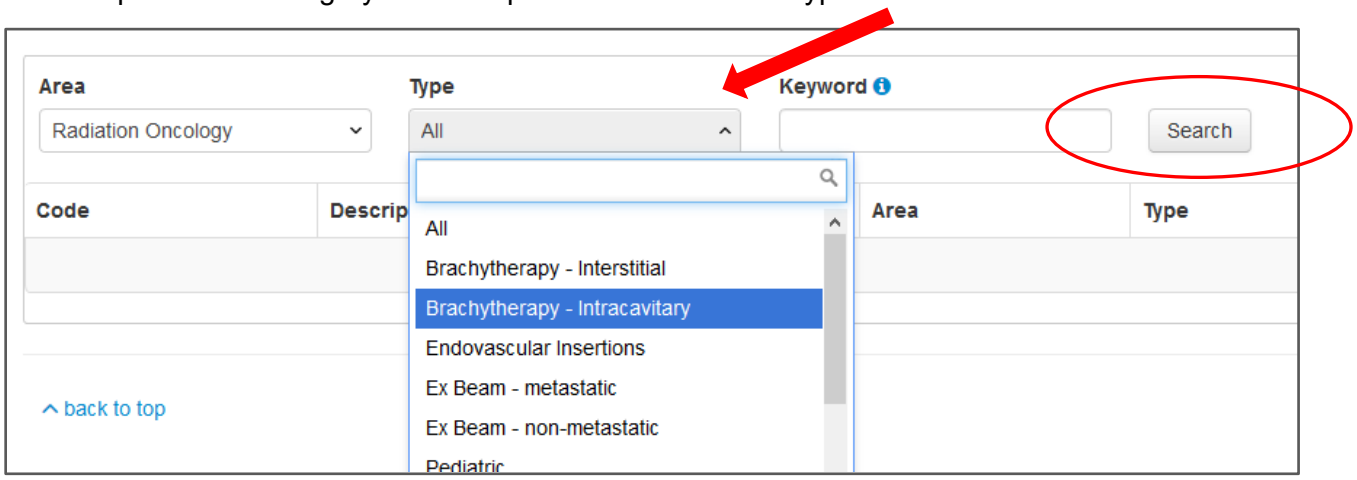
Enter any additional pertinent information related to the case in the "Add Comments" field, except for patient identifiable information (e.g., name or Social Security number). The Comments field can also be used to enter procedures that are not currently tracked in the Case Log System. This field has a 1,000-character limit.


### *Entering Procedure/Simulation Information*

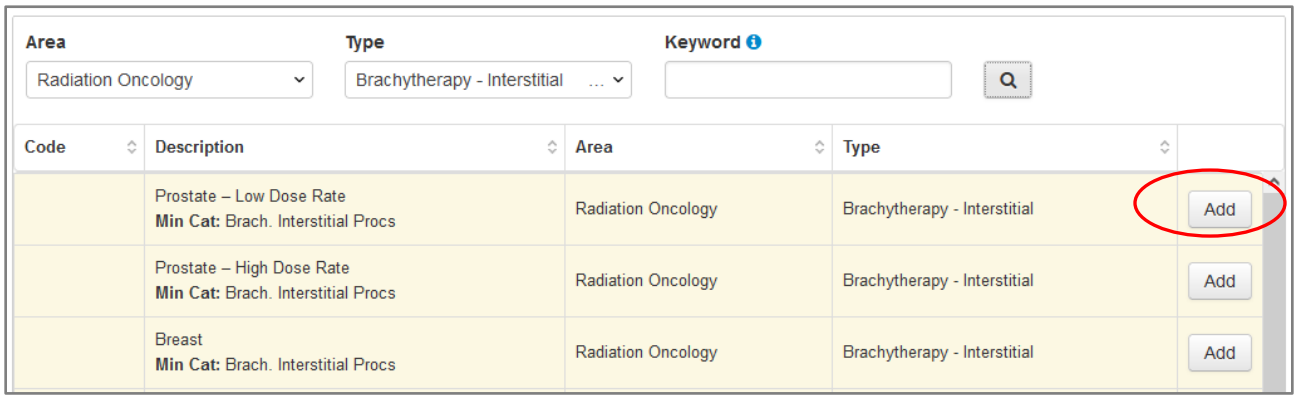
Select "Radiation Oncology" for the Area.



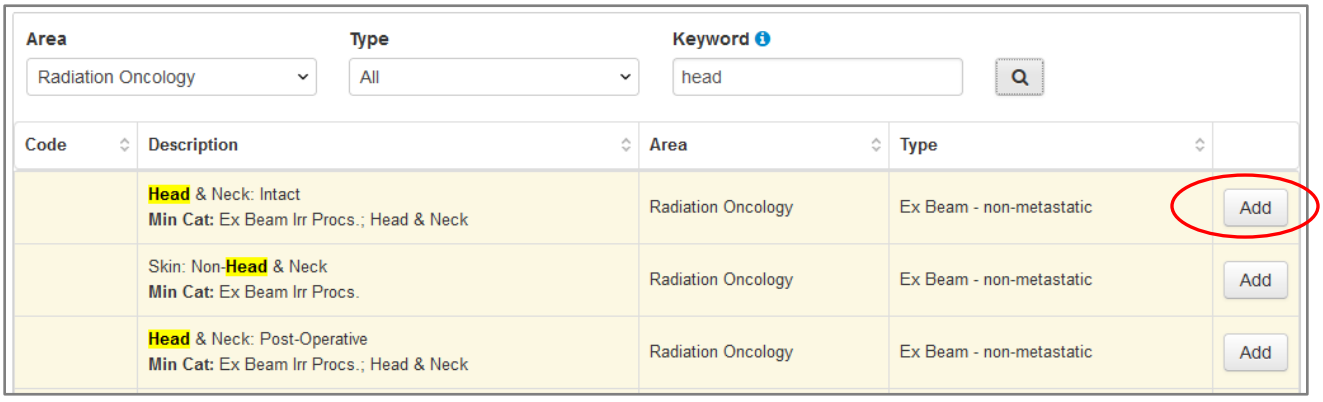
Select a procedural category in the drop-down menu under “Type” and click “Search.”




A list of procedures will be displayed under “Description.” Click “Add” to include a particular procedure to the case. It is possible for a case to include more than one procedure (see the Frequently Asked Questions section for more guidance on this topic).




To search for a procedure, either: Select “All” under “Type,” and in the “Keyword” box, type in a few letters of the procedure sought; or, type a procedure code from the list in Appendix A. Click “Add” to include the procedure to the case.



### *Submitting a Case*

To save a case, click “Submit.”


## Guidance for Logging Particular Procedural Categories

Program directors and residents frequently raise questions regarding the appropriate category to log particular cases, due to differing terminology used by the ACGME, the Food and Drug Administration (FDA), and the Nuclear Regulatory Commission (NRC), as well as the periodic introduction of new agents and delivery systems that often do not permit simple categorization. This guide has been included to reduce this confusion at the resident and program level.

This section is organized by procedural category plus an Additional FAQs category that addresses more general questions related to the Case Log System.

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

Non-Holman Pathway residents are required to simulate a minimum of 450 EBRT cases, and Holman Pathway residents are required to simulate a minimum of 350 EBRT cases.

#### New EBRT Disease Site Minimums, Effective July 1, 2022

To ensure sufficient clinical exposure to less common disease sites/diagnoses within the Non-Metastatic External Beam Radiation Therapy procedural category, the Review Committee now requires residents to meet 10 new disease site minimums, which are outlined in Program Requirements IV.C.5.c).(1)-(10). Holman Pathway residents are required to meet at least 75 percent of each disease site minimum target to satisfy the EBRT requirement. See the two charts in Section One: Procedure Minimums that list the number of required cases for both Non-Holman Pathway residents and Holman Pathway residents.

While the new EBRT minimums became effective July 1, 2022, review the "Case Log Requirements by Graduating Class" document to determine which revised minimums will be enforced for graduates in a particular academic year.

#### Logging Observed EBRT Site-Specific Minima

Residents who do not meet all 10 required site-specific minima (IV.C.5.c).(1)-IV.C.5.c).(10)) may log the remaining cases in each category as “observed.” At most, two cases or up to 25 percent of each site-specific minimum (whichever is greater) may be logged as observed cases to meet each minimum requirement. This 25 percent target is applicable to Holman Pathway residents

as well. See the two charts in Section One: Procedure Minimums that list the allowed number of observed cases for both Non-Holman Pathway residents and Holman Pathway residents.

To log a single case as "observed," residents should comprehensively review the oncologic history/consultation, diagnostic imaging, treatment recommendation, cross-sectional simulation, target volumes, treatment plan, and on-treatment management of a prior representative case with an attending physician on an individual basis. This should be conducted using the medical record and treatment planning system but may be supplemented with educational materials from an attending physician. This may not be conducted in groups.

A resident may not log a prior case multiple times as "observed," but more than one resident may log the same prior case as "observed" if there is particular educational value.

It is the responsibility of the program director, with input from the Clinical Competency Committee, to assess individual residents' competence for graduation, irrespective of whether all site-specific minima are met by "performed" or "observed" logged simulations.

It is recommended that individual programs regularly review all required Case Log minima to assess whether residents have sufficient exposure across the breadth of radiation oncology. If a program is unable to provide sufficient clinical exposure to a given disease site (e.g., esophagus) or technical procedure (e.g., SBRT, SRS), it is recommended that the rotation schedule be reviewed, and that supplemental disease site-specific education be implemented.

**FAQs: EBRT Minimums**

**Q:** Which cases and clinical scenarios are applicable to the site-specific minima in the **External Beam – Non-Metastatic** category?

**A: Bone/soft tissue sarcoma simulations:** This includes EBRT for soft tissue sarcomas or bone sarcomas, either in the pre-operative, post-operative, definitive, or recurrent/palliative settings. The following should not be logged as bone/soft tissue sarcoma simulations, but as follows:

- Pediatric sarcomas should be logged under pediatric categories.
- Metastases should be logged under the External Beam - Metastatic, SRS, or SBRT categories, depending on technique.
- Heterotopic bone should be logged under EBRT Benign: Heterotopic Bone.

**Post-mastectomy simulations:** This includes EBRT to the chest wall and/or regional lymph nodes for primary breast cancers following mastectomy.

Metastases should be logged under the External Beam - Metastatic, SRS, or SBRT categories, depending on technique.

**Central nervous system simulations:** This includes EBRT for primary tumors of the central nervous system (intracranial and spinal cord). These can be intact or post-operative and any histology. The following should not be logged as central nervous system simulations, but as follows:

- Pediatric CNS tumors should be simulated under the pediatric category. This excludes intracranial or spinal stereotactic radiosurgery.
- Metastases should be logged under the External Beam - Metastatic, SRS, or SBRT categories, depending on technique.

**Head and neck simulations:** This includes EBRT to the head and neck (excluding CNS) regardless of histology, and includes treatment in the definitive, pre-operative, post-

operative, or recurrent/palliative settings. Skin cancers of the head and neck are included in this minimum.

In the Case Log System, the sum of the following non-metastatic EBRT procedural categories will determine if this minimum has been met: Head and Neck: Intact; Head and Neck: Post-Operative; and Head and Neck: Skin.

**Esophagus simulations:** This includes EBRT for primary tumors of the esophagus or gastroesophageal junction, and includes treatment in the definitive, pre-operative, post-operative, or recurrent/palliative settings.

**Anorectal simulations:** This includes EBRT to the pelvis for tumors of the anus or rectum, and includes treatment in the definitive, pre-operative, post-operative, or recurrent/palliative settings.

In the Case Log System, the sum of the following non-metastatic EBRT procedural categories will determine if this minimum has been met: Gastrointestinal: Rectum; and Gastrointestinal: Anus.

**Non-prostate genitourinary simulations:** This includes EBRT to the abdomen or pelvis for tumors of the testes, bladder, penis, urethra, ureters, or kidneys.

Brachytherapy simulations should be logged under brachytherapy categories.

In the Case Log System, the sum of the following non-metastatic EBRT procedural categories will determine if this minimum has been met: Genitourinary: Bladder; Genitourinary: Testes; and Genitourinary: Other (e.g., urethral, penile, ureteral, renal).

**Gynecologic simulations:** This includes EBRT to the abdomen or pelvis for tumors of the vulva, vagina, uterus, uterine cervix, or ovaries/fallopian tubes.

Brachytherapy simulations should be logged under brachytherapy categories.

In the Case Log System, the sum of the following non-metastatic EBRT procedural categories will determine if this minimum has been met: Gynecologic: Cervix Intact; Gynecologic: Cervix Post-Hysterectomy; Gynecologic: Uterus; Gynecologic: Other.

**Lymphoma simulations:** This includes EBRT to any site for lymphomas, including special techniques (total body irradiation, total skin irradiation, total lymphoid irradiation, etc.), and includes treatment in the definitive, consolidation, peri-transplant, or recurrent/palliative settings.

Pediatric simulations should be simulated under the pediatric category.

In the Case Log System, the sum of the following non-metastatic EBRT procedural categories will determine if this minimum has been met: Hodgkins Lymphoma and Non-Hodgkins Lymphoma.

**Non-small cell lung cancer simulations:** This includes EBRT for primary non-small cell lung cancers in the definitive, pre-operative, post-operative, or recurrent/palliative settings. The following should not be logged as non-small cell lung cancer simulations, but as follows:

- Lung metastases should be logged under the External Beam - Metastatic, SRS, or SBRT categories, depending on technique.
- Primary lung cancers treated with lung SBRT should be logged under the SBRT - Lung category.

**Q:** When may multiple procedures be logged for a single patient undergoing EBRT?

**A:** Patients undergoing EBRT may generate more than one logged procedure under either of the following circumstances:

- A single or different resident participates actively in the simulation of a separate anatomic site or substantial volume reduction for a given course of therapy, requiring a separate simulation with a different isocenter that represents sequential, non-concurrent therapy (e.g., a posterior fossa boost planned by the same or a second resident following the planning and initial treatment; or a boost to the primary tumor site in the pelvis when the initial whole pelvic treatment was planned). Adaptive treatments due to changes in anatomy without a substantial volume reduction should *not* be counted as more than one logged procedure (e.g., daily adaptation for pancreas stereotactic treatment).
- A second course of therapy to a different site, treated sequentially for a new indication, may be logged if the new area is simulated by the same resident or by a different resident (e.g., a lung cancer patient treated with chest radiotherapy who subsequently develops a spine metastasis and is treated with palliative radiotherapy.

**Q:** How should mycosis fungoides cases be logged?

**A:** Mycosis fungoides cases can be logged as Non-Hodgkins Lymphoma cases.

**Q:** Which cases and clinical scenarios should be logged under the **External Beam – Metastatic** procedural category?

**A:** This includes external beam radiotherapy for treatment of metastases. External beam radiotherapy to a primary or locally-recurrent tumor should not be logged under this category and should instead be logged under the appropriate External Beam – Non-Metastatic category.

**Q:** Which procedural category should be used for a cutaneous head and neck lesion case tracking up the cranial nerves (simulation, contour, treatment)?

**A:** This should be logged as Head and Neck: Skin, which will be will be counted towards the EBRT Head and Neck minima.

### *Brachytherapy-Interstitial / Brachytherapy- Intracavitary*

All residents are required to log seven Brachytherapy-Interstitial procedures and 15 Brachytherapy-Intracavitary procedures. Of the 15 Intracavitary procedures, five must be tandem-based insertions for at least two patients, and no more than five should be cylinder insertions. Residents graduating at the conclusion of the 2022-2023 academic year may adhere to the previous brachytherapy minimums. Review the "Case Log Requirements by Graduating Class" document for further guidance.

#### FAQs: Brachytherapy-Interstitial and Brachytherapy-Intracavitary Minimums

**Q:** How should brachytherapy cases be counted?

**A:** Only one resident is allowed to count a specific brachytherapy application in a given patient. Residents participating in brachytherapy cases may count them as performed, provided that resident involvement includes planning, review of dosimetry, and hands-on participation in a significant portion of the implantation procedure. Separate applications (applicator insertions) of an implant can count as separate procedures, but multiple fractions of a single application (applicator insertion) can only be counted once for the single application.

To develop competence in the performance of procedures, the Review Committee requires a limit of five vaginal cylinder brachytherapy treatments, to allow for resident training in cervical cancer brachytherapy procedures.

**Q:** Can an obturator used for interstitial implantation count as an intracavitary applicator?

**A:** Obturator placement used as a spacer in conjunction with an interstitial implant that is not used directly as a treatment delivery device should be counted as an interstitial case, and not as an intracavitary case. If the obturator or cylinder receives isotope and is used in treatment delivery, it could be counted as either an intracavitary case or an interstitial case, but not both.

**Q:** Is it recommended that residents do not perform more than five cylinder insertions?

**A:** Not necessarily. If the 15 intracavitary requirements are met, and the resident has other cylinder insertions to log, the Review Committee would not consider the additional procedures as non-compliant with the Program Requirements.

**Q:** If interstitial needles are used during a tandem-based insertion for tumors of the uterus/cervix, what is the appropriate procedural category (intracavitary versus interstitial)?

**A:** This procedure may be logged as either intracavitary or interstitial, but not both.

**Q:** If a cylinder and interstitial needles are used for gynecologic tumors, what is the appropriate procedural category (intracavitary versus interstitial)?

**A:** This procedure may be logged as either intracavitary or interstitial, but not both.

**Q:** How should high-dose rate surface brachytherapy for the treatment of skin cancer be logged?

**A:** This procedure is not part of a specific requirement and is not currently tracked. Residents can log the procedure in the “Comments” box.

**Q:** How should GammaTile cases for brain metastases be logged?

**A:** These cases should be logged as Brachytherapy-Interstitial.

**Q:** Should eye plaque brachytherapy be logged as interstitial or intracavitary?

**A:** Since it usually involves an incision in the conjunctiva, eye plaque brachytherapy should be logged as Brachytherapy-Interstitial.

**Q:** Should strut-adjusted volume implant (SAVI) multi-catheter partial breast system procedures be logged as brachytherapy interstitial or intracavitary?

**A:** These procedures should be logged as Brachytherapy-Interstitial.

**Q:** How should intraoperative radiation therapy (IORT) cases that use brachytherapy be logged?

**A:** These IORT cases should be logged as Brachytherapy-Interstitial.

**Q:** How should intravascular brachytherapy for coronary artery disease be logged?

**A:** This should be logged as Brachytherapy-Intracavitary.

**Q:** For residents logging brachytherapy cases, do they log per insertion or per patient?

**A:** The Program Requirements state that each resident must perform at least seven interstitial and 15 intracavitary procedures. They can be multiple insertions for the same patient. Of the required intracavitary procedures, at least five must be tandem-based for at least two patients, but that is the only patient requirement.

### *Pediatric Patients*

All residents are required to log 12 pediatric patients, including at least nine patients with solid tumors.

The Review Committee does not limit pediatric cases to a specific age. Residents can continue to count cases as "pediatric" even if the patient has aged into early adulthood, if the patient is being treated for a pediatric condition. Total body irradiation and palliative treatment of metastatic sites can be counted toward the requirement.

**FAQs: Pediatric Patients Minimums**

**Q:** Can pediatric cases be logged under multiple categories (e.g., CNS tumor in a pediatric patient)?

**A:** Pediatric patients treated with external beam radiation therapy should be logged under a single pediatric procedural category. If no suitable procedural category exists (e.g., hepatoblastoma), the category Pediatric - Other should be used.

For special techniques (SRS, SBRT, brachytherapy) in a pediatric patient, the relevant technical procedural category should be used. For example, a Wilms Tumor lung metastasis treated with SBRT should be logged under SBRT - Lung. This case should not be logged under multiple categories.

For lymphoma cases, the category under which a procedure is logged depends on the protocol used and not just the age and diagnosis, given the overlap for some young adults.

**Q:** How should mycosis fungoides cases be logged?

**A:** Mycosis fungoides cases can be logged as Non-Hodgkins Lymphoma cases.

### *Intracranial Stereotactic Radiosurgery (SRS-Brain)*

All residents are required to log 20 patients treated with intracranial stereotactic radiosurgery (SRS-Brain).

Applicable cases include SRS to the cranium, skull base, or intracranial contents for any histology or indication (e.g., brain metastases, primary brain tumors, functional disorders, arterio-venous malformations). Therapies may be delivered by a variety of available technologies using stereotactic guidance localization procedures (e.g., Gamma Knife, Linear accelerator (LINAC) machines, or other comparable systems).

Radiosurgery may be administered in a single fraction or extended to a maximum of five fractions. More protracted courses of stereotactic radiation should be classified as external beam radiation cases.

### *Stereotactic Body Radiation Therapy (SBRT)*

All residents are required to log 20 patients treated with SBRT.

Therapies may be delivered by a variety of available technologies using stereotactic guidance localization procedures (e.g., Gamma Knife, linear accelerator (LINAC) machines, or other comparable systems).

Radiosurgery may be administered in a single fraction or extended to a maximum of five fractions. More protracted courses of stereotactic radiation should be classified as external beam radiation cases.

**FAQs: SBRT**

**Q:** Which cases and clinical scenarios are applicable to the SBRT procedural categories?

**A: SBRT - Liver Metastatic:** This includes SBRT to metastatic disease in the liver or biliary system for any histology or indication (i.e., liver metastases).

**SBRT - Liver Primary:** This includes SBRT to primary disease in the liver or biliary system for any histology or indication (i.e., primary liver tumors, primary biliary tumors).

**SBRT - Lung Metastatic:** This includes SBRT to metastatic disease in the lung for any histology or indication (i.e., lung metastases).

**SBRT - Lung Primary:** This includes SBRT to primary disease in the lung for any histology or indication (i.e., primary lung tumors, primary NSCLC).

**SBRT - Other Extracranial:** This includes SBRT to any primary disease except for the cranium, skull base, intracranial contents, lung, liver, pancreas, or spine for any histology or indication.

**SBRT - Pancreas:** This includes SBRT to primary disease in the pancreas for any histology or indication (i.e., primary pancreatic tumors).

**SBRT - Secondary Site:** This includes SBRT to any metastatic disease that does not meet the above categories/criteria.

**SBRT - Spine:** This includes SBRT to the spine (C1-coccyx) for any histology or indication (e.g., bone metastases, meningiomas, schwannomas, tumors of the spinal cord, arterio-venous malformations).

**Q:** Which procedural category should be used when a patient is treated to a site with SBRT, but an external beam radiation therapy category is also applicable (e.g., SBRT for hepatocellular carcinoma or SBRT for pancreas)?

**A:** For patients treated with special techniques (SRS, SBRT, brachytherapy), the relevant technical procedural category should be used (e.g., SBRT - Liver) even if a fractionated external beam category also exists (e.g., External Beam - Non-Metastatic: Hepatobiliary). The case should not be logged under multiple categories. Pancreas SBRT should be logged under SBRT - Pancreas.

**Q:** Which procedural category should be used for a metastasis in the liver from metastatic colorectal cancer - SBRT - Liver Metastatic or SBRT - Secondary Site?

**A:** This should be logged as SBRT - Liver Metastatic.

### *Radioimmunotherapy, Other Targeted Therapeutic Radiopharmaceuticals, or Unsealed Sources*

Residents are required to log eight Radioimmunotherapy, Other Targeted Therapeutic Radiopharmaceuticals, or Unsealed Sources procedures. Residents graduating at the conclusion of the 2022-2023 academic year may adhere to the previous unsealed sources

minimums. Review the "Case Log Requirements by Graduating Class" document for further guidance. Of the eight procedures:

- three must be oral administration of I-131 with administered activity equal to or in excess of 1.22 Gigabecquerels (33 mCi). Conditions treated with oral I-131 may be either benign or malignant, but the counted administration must be for therapeutic intent, rather than diagnostic intent.
- five cases must be parenteral administration of any alpha emitter, beta emitter, mixed emission, or a photon-emitting radionuclide with a photon energy less than 150 keV, for which a written directive is required, and/or parenteral administration of any other radionuclide, for which a written directive is required.

Note that this category includes I-131 labeled antibodies and I-131 MIBG, as well as a majority of other radioactive isotopes used for therapeutic purposes, such as Samarium, or other radiolabeled antibodies administered by a parenteral route. This experience must be obtained under the supervision of an authorized user.

**FAQs: Radioimmunotherapy, Other Targeted Therapeutic Radiopharmaceuticals, or Unsealed Sources**

**Q:** Why do residents have to participate in unsealed source procedures?

**A:** The NRC has long recognized radiation oncologists as qualifying for “Authorized User” status based on the fact that radiation oncology education includes the required clinical exposure and didactics in physics, radiobiology, and clinical applications of unsealed sources. As the NRC mandates that to maintain “Authorized User” status radiation oncologists must demonstrate “formal experience” with unsealed sources, this experience must be included in the educational program.

For a radiation oncologist to be certified as “Authorized User-Eligible” (AU-E) through the NRC, the ABR requires a specific form to be completed and submitted that represents the NRC requirements of three oral administrations of >33 mCi of I-131 and three other parenteral administrations, which is lower than that required by the ACGME. Note that the ABR will discontinue including AU-E designations on ABR certificates issued after December 31, 2023. See the ABR website for additional information.

For a resident to be eligible as an “Authorized User” through the NRC, the Review Committee strongly recommends following NRC §35.390, which requires a minimum of 700 hours of training and experience, including a minimum of 200 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed byproduct material requiring a written directive. These hours can include basic physics, cancer biology, and general clinical care of oncologic patients who may or may not receive unsealed sources. More information on becoming an Authorized User is found on the NRC website.

**Q:** What constitutes participation in unsealed source procedures?

**A:** Since these unsealed source procedures are generally performed outside of the radiation oncology facility, some residents may do formal rotations for fixed periods, and others may do cases as they come up, without formal fixed rotations. Therefore, the extent of involvement in these procedures will vary. However, residents fulfill the eight-case requirement, it is expected that they will understand the indications for the procedure, alternatives, the radiation safety issues, and the methods involved in the calculations and

administration of the isotope. Residents should be present when the isotope is delivered and should understand the precautions and follow-up procedure. Ultimately, it is the Authorized User who determines the participation of a resident and signs the log to indicate the procedure has been satisfactorily completed.

"Procedure" corresponds to a single treatment in a unique patient, or a repeat treatment in the same patient, as long as the repeat treatment occurs on a separate day. Intravenous or intra-arterial instillations of multiple lesions during the same procedure, regardless of individual dosimetry, must be counted as a single procedure.

**Q:** How can programs at institutions that also have a nuclear medicine program meet the unsealed source minimum requirement?

**A:** At institutions with both nuclear medicine and radiation oncology programs, the programs are expected to create an environment of collaboration and develop a system of cooperation, with the goals of identifying adequate numbers of patients for all residents and ensuring all residents receive adequate clinical and didactic training in radionuclide therapy.

**Q:** Does administration of radioactive isotopes for PET scanning count toward the unsealed source requirement?

**A:** Administration of diagnostic doses of radioactive sources, orally or parenterally, does not count toward the unsealed source requirement. Only those procedures in which therapeutic levels of unsealed sources are used qualify.

**Q:** Do residents need to keep a separate log for documentation of unsealed sources?

**A:** Information on becoming an Authorized User is available on the NRC website.

**Q:** How should the intravascular administration of Therasphere be logged?

**A:** Therapeutic microspheres for treatment of disease in any anatomic site (TheraSpheres®, SIR Spheres®, etc.) should be entered as Other - Unsealed Sources.

**Q:** How should Xofigo cases be logged?

**A:** Xofigo cases should be logged as Other - Unsealed Sources.

**Q:** How should Lutathera (lutetium Lu 177 dotatate) cases be logged?

**A:** Lutathera cases should be logged as Unsealed Sources - Radiolabeled Drugs.

### *Additional FAQs*

**Q:** How should intra-operative sarcoma radiation cases be logged?

**A:** Intra-operative sarcoma procedures should be categorized based on the type of radiation used. It could be external beam or brachytherapy, again, depending on the type of radiation.

**Q:** When might a resident log a single case under multiple procedural categories?

**A:** This is not permitted for the exact same simulation and treatment plan to a given anatomic site. However, it is permitted and encouraged if different anatomic sites are treated and/or different techniques are utilized for the same simulation. For example:

- Concurrent or sequential treatment of a lung tumor and bone metastasis (different targets).

- Concurrent or sequential treatment of the whole brain followed by stereotactic radiosurgery boost (different techniques).

**Q:** Can procedures performed during an international rotation be counted toward Case Log minimums?

**A:** No. Cases performed during the international rotation will not count toward meeting ACGME requirements nor toward any American Board of Radiology certification requirements.

**Q:** Can residents log procedures that are not being tracked in the Case Log System?

**A:** Yes. Specific information about the procedure(s) can be entered in the "Comments" box.

**Q:** What happens if residents do not log their cases in the Case Log System?

**A:** Failure to log cases may have a negative impact on board certification and NRC requirements for Authorized User status. In addition, logging cases accurately (even after the required minimums are met) gives the Review Committee an accurate portrait of resident clinical volume and variety, as well as evidence related to the quality of the program's procedural education and training.

**Q:** Can the program director and coordinator access the Case Log System?

**A:** Yes. Program directors and coordinators can access the system in a "view only" mode.

**Q:** Do residents have access to their Case Logs after graduation from their residency program?

**A:** Yes. Residents can log into the Case Log System to download their Case Log reports after they have graduated. However, they will no longer have the ability to add cases to the system.

## Contact Information

Contact Review Committee staff members with any questions about the Program Requirements or procedural minimums. Staff contact information is found on specialty section of the ACGME website.

Email the ADS support mailbox with any technical questions related to the Case Log System: ADS@acgme.org.

## Appendix A: Procedures Mapped to Minimums Categories

The following table maps all procedures listed in the ACGME Case Log System (under Description) to the appropriate minimums category. Note the following:

- Some procedures are included in more than one minimums category.
- Type (third column) refers to the "Type" column within the Case Log System.
- The codes listed in the last column can be entered into the "Keyword" box in the Case Log System to look up a particular procedure.

| Minimums Category | Procedure (Description) | Type | Code |
|---|---|---|---|
| Ex Beam Irr Procs. | Benign: Eye | Ex Beam - non-metastatic | 430105U |
| Ex Beam Irr Procs. | Benign: Heterotopic Bone | Ex Beam - non-metastatic | 430002U |
| Ex Beam Irr Procs. | Benign: Other | Ex Beam - non-metastatic | 430106U |
| Ex Beam Irr Procs. | Bone Sarcoma/Soft Tissue Sarcoma | Ex Beam - non-metastatic | 430006U |
| Ex Beam Irr Procs. | Breast: Intact | Ex Beam - non-metastatic | 430003U |
| Ex Beam Irr Procs. | Breast: Post-Mastectomy | Ex Beam - non-metastatic | 430107U |
| Ex Beam Irr Procs. | CNS | Ex Beam - non-metastatic | 430001U |
| Ex Beam Irr Procs. | CNS (non-medulloblastoma) | Pediatric | 430039U |
| Ex Beam Irr Procs. | Ewings Sarcoma/Bone Tumor | Pediatric | 430043U |
| Ex Beam Irr Procs. | Gastrointestinal: Anus | Ex Beam - non-metastatic | 430114U |
| Ex Beam Irr Procs. | Gastrointestinal: Colon | Ex Beam - non-metastatic | 430112U |
| Ex Beam Irr Procs. | Gastrointestinal: Esophagus | Ex Beam - non-metastatic | 430008U |
| Ex Beam Irr Procs. | Gastrointestinal: Hepatobiliary | Ex Beam - non-metastatic | 430111U |
| Ex Beam Irr Procs. | Gastrointestinal: Other | Ex Beam - non-metastatic | 430115U |
| Ex Beam Irr Procs. | Gastrointestinal: Pancreas | Ex Beam - non-metastatic | 430110U |
| Ex Beam Irr Procs. | Gastrointestinal: Rectum | Ex Beam - non-metastatic | 430113U |
| Ex Beam Irr Procs. | Gastrointestinal: Stomach | Ex Beam - non-metastatic | 430109U |
| Ex Beam Irr Procs. | Genitourinary: Bladder | Ex Beam - non-metastatic | 430116U |
| Ex Beam Irr Procs. | Genitourinary: Other | Ex Beam - non-metastatic | 430118U |
| Ex Beam Irr Procs. | Genitourinary: Prostate | Ex Beam - non-metastatic | 430009U |
| Ex Beam Irr Procs. | Genitourinary: Testes | Ex Beam - non-metastatic | 430117U |
| Ex Beam Irr Procs. | Gynecologic: Cervix Intact | Ex Beam - non-metastatic | 430010U |
| Ex Beam Irr Procs. | Gynecologic: Cervix Post-Hysterectomy | Ex Beam - non-metastatic | 430119U |
| Ex Beam Irr Procs. | Gynecologic: Other | Ex Beam - non-metastatic | 430121U |
| Ex Beam Irr Procs. | Gynecologic: Uterus | Ex Beam - non-metastatic | 430120U |
| Ex Beam Irr Procs. | Head & Neck: Intact | Ex Beam - non-metastatic | 430007U |
| Ex Beam Irr Procs. | Head & Neck: Post-Operative | Ex Beam - non-metastatic | 430108U |
| Ex Beam Irr Procs. | Head & Neck: Skin | Ex Beam - non-metastatic | DG1532 |
| Ex Beam Irr Procs. | Hodgkins Lymphoma | Ex Beam - non-metastatic | 430011U |
| Ex Beam Irr Procs. | Hodgkins Lymphoma | Pediatric | 430040U |
| Ex Beam Irr Procs. | Leukemia | Pediatric | 430037U |
| Ex Beam Irr Procs. | Leukemia/Myeloma | Ex Beam - non-metastatic | 430123U |
| Ex Beam Irr Procs. | Lung/Mediastinum: Non-Small Lung Cancer | Ex Beam - non-metastatic | 430125U |
| Ex Beam Irr Procs. | Lung/Mediastinum: Other | Ex Beam - non-metastatic | 430126U |
| Ex Beam Irr Procs. | Lung/Mediastinum: Small Cell Lung Cancer | Ex Beam - non-metastatic | 430013U |
| Ex Beam Irr Procs. | Medulloblastoma | Pediatric | 430038U |
| Ex Beam Irr Procs. | Neuroblastoma | Pediatric | 430044U |

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|---|---|---|---|
| Ex Beam Irr Procs. | Non Hodgkins Lymphoma | Pediatric | 430041U |
| Ex Beam Irr Procs. | Non-Hodgkins Lymphoma | Ex Beam - non-metastatic | 430122U |
| Ex Beam Irr Procs. | Other | Pediatric | 430047U |
| Ex Beam Irr Procs. | Other Hematologic Malignancies | Ex Beam - non-metastatic | 430124U |
| Ex Beam Irr Procs. | Retinoblastoma | Pediatric | 430045U |
| Ex Beam Irr Procs. | Rhabdomyosarcoma/STS | Pediatric | 430042U |
| Ex Beam Irr Procs. | SBRT - Liver Metastatic | SBRT | DG1535 |
| Ex Beam Irr Procs. | SBRT - Liver: Primary | SBRT | 430148U |
| Ex Beam Irr Procs. | SBRT - Lung: Metastatic | SBRT | DG1536 |
| Ex Beam Irr Procs. | SBRT - Lung: Primary | SBRT | 430149U |
| Ex Beam Irr Procs. | SBRT - Other Extracranial | SBRT | 430103U |
| Ex Beam Irr Procs. | SBRT - Pancreas | SBRT | DG1534 |
| Ex Beam Irr Procs. | SBRT - Secondary Site | SBRT | DG1533 |
| Ex Beam Irr Procs. | SBRT - Spine | SBRT | 430150U |
| Ex Beam Irr Procs. | Secondary Site | Ex Beam - metastatic | 430015U |
| Ex Beam Irr Procs. | Skin: Non-Head & Neck | Ex Beam - non-metastatic | 430012U |
| Ex Beam Irr Procs. | SRS - Brain | SRS | 430102U |
| Ex Beam Irr Procs. | Unknown | Ex Beam - non-metastatic | 430014U |
| Ex Beam Irr Procs. | Wilms Tumor | Pediatric | 430046U |
| Bone/Soft Tissue Sarcoma | Bone Sarcoma/Soft Tissue Sarcoma | Ex Beam - non-metastatic | 430006U |
| Post Mastectomy Breast | Breast: Post-Mastectomy | Ex Beam - non-metastatic | 430107U |
| Central Nervous System | CNS | Ex Beam - non-metastatic | 430001U |
| Head & Neck | Head & Neck: Intact | Ex Beam - non-metastatic | 430007U |
| Head & Neck | Head & Neck: Post-Operative | Ex Beam - non-metastatic | 430108U |
| Head & Neck | Head & Neck: Skin | Ex Beam - non-metastatic | DG1532 |
| Esophagus | Gastrointestinal: Esophagus | Ex Beam - non-metastatic | 430008U |
| Anorectal | Gastrointestinal: Anus | Ex Beam - non-metastatic | 430114U |
| Anorectal | Gastrointestinal: Rectum | Ex Beam - non-metastatic | 430113U |
| Non-Prostate Genitourinary | Genitourinary: Bladder | Ex Beam - non-metastatic | 430116U |
| Non-Prostate Genitourinary | Genitourinary: Other | Ex Beam - non-metastatic | 430118U |
| Non-Prostate Genitourinary | Genitourinary: Testes | Ex Beam - non-metastatic | 430117U |
| Gynecologic | Gynecologic: Cervix Intact | Ex Beam - non-metastatic | 430010U |
| Gynecologic | Gynecologic: Cervix Post-Hysterectomy | Ex Beam - non-metastatic | 430119U |
| Gynecologic | Gynecologic: Other | Ex Beam - non-metastatic | 430121U |
| Gynecologic | Gynecologic: Uterus | Ex Beam - non-metastatic | 430120U |
| Lymphoma | Hodgkins Lymphoma | Ex Beam - non-metastatic | 430011U |
| Lymphoma | Non-Hodgkins Lymphoma | Ex Beam - non-metastatic | 430122U |
| Non-Small Cell Lung Cancer | Lung/Mediastinum: Non-Small Lung Cancer | Ex Beam - non-metastatic | 430125U |
| Brach. Interstitial Procs. | Breast | Brachytherapy - Interstitial | DG1544 |
| Brach. Interstitial Procs. | GYN/Pelvis | Brachytherapy - Interstitial | DG1545 |
| Brach. Interstitial Procs. | Head and Neck | Brachytherapy - Interstitial | DG1546 |
| Brach. Interstitial Procs. | Other - Brachytherapy Interstitial | Brachytherapy - Interstitial | DG1547 |
| Brach. Interstitial Procs. | Prostate – High Dose Rate | Brachytherapy - Interstitial | 430130U |
| Brach. Interstitial Procs. | Prostate – Low Dose Rate | Brachytherapy - Interstitial | 430056U |
| Brach. Interstitial Procs. | Soft Tissue Sarcoma | Brachytherapy - Interstitial | DG1548 |
| Brach. Intracavitary Procs. | Bile Duct | Brachytherapy - Intracavitary | DG1542 |
| Brach. Intracavitary Procs. | Cervix/Uterus - Cylinder Insertion | Brachytherapy - Intracavitary | DG1537 |

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|---|---|---|---|
| Brach. Intracavitary Procs. | Cervix/Uterus - Tandem Based | Brachytherapy - Intracavitary | DG1538 |
| Brach. Intracavitary Procs. | Endobronchial | Brachytherapy - Intracavitary | DG1540 |
| Brach. Intracavitary Procs. | Esophagus | Brachytherapy - Intracavitary | DG1541 |
| Brach. Intracavitary Procs. | Other - Brachytherapy Intracavitary | Brachytherapy - Intracavitary | DG1543 |
| Cylinder Procs. | Cervix/Uterus - Cylinder Insertion | Brachytherapy - Intracavitary | DG1537 |
| Tandem Procs. | Cervix/Uterus - Tandem Based | Brachytherapy - Intracavitary | DG1538 |
| Ped Solid Tumor Procs. | CNS (non-medulloblastoma) | Pediatric | 430039U |
| Ped Solid Tumor Procs. | Ewings Sarcoma/Bone Tumor | Pediatric | 430043U |
| Ped Solid Tumor Procs. | Hodgkins Lymphoma | Pediatric | 430040U |
| Ped Solid Tumor Procs. | Medulloblastoma | Pediatric | 430038U |
| Ped Solid Tumor Procs. | Neuroblastoma | Pediatric | 430044U |
| Ped Solid Tumor Procs. | Non Hodgkins Lymphoma | Pediatric | 430041U |
| Ped Solid Tumor Procs. | Other | Pediatric | 430047U |
| Ped Solid Tumor Procs. | Retinoblastoma | Pediatric | 430045U |
| Ped Solid Tumor Procs. | Rhabdomyosarcoma/STS | Pediatric | 430042U |
| Ped Solid Tumor Procs. | Wilms Tumor | Pediatric | 430046U |
| Ped Total Procs. | CNS (non-medulloblastoma) | Pediatric | 430039U |
| Ped Total Procs. | Ewings Sarcoma/Bone Tumor | Pediatric | 430043U |
| Ped Total Procs. | Hodgkins Lymphoma | Pediatric | 430040U |
| Ped Total Procs. | Leukemia | Pediatric | 430037U |
| Ped Total Procs. | Medulloblastoma | Pediatric | 430038U |
| Ped Total Procs. | Neuroblastoma | Pediatric | 430044U |
| Ped Total Procs. | Non Hodgkins Lymphoma | Pediatric | 430041U |
| Ped Total Procs. | Other | Pediatric | 430047U |
| Ped Total Procs. | Retinoblastoma | Pediatric | 430045U |
| Ped Total Procs. | Rhabdomyosarcoma/STS | Pediatric | 430042U |
| Ped Total Procs. | Wilms Tumor | Pediatric | 430046U |
| SRS / Brain Procs. | SRS - Brain | SRS | 430102U |
| SBRT Procs. | SBRT - Liver Metastatic | SBRT | DG1535 |
| SBRT Procs. | SBRT - Liver:  Primary | SBRT | 430148U |
| SBRT Procs. | SBRT - Lung:  Metastatic | SBRT | DG1536 |
| SBRT Procs. | SBRT - Lung:  Primary | SBRT | 430149U |
| SBRT Procs. | SBRT - Other Extracranial | SBRT | 430103U |
| SBRT Procs. | SBRT - Pancreas | SBRT | DG1534 |
| SBRT Procs. | SBRT - Secondary Site | SBRT | DG1533 |
| SBRT Procs. | SBRT - Spine | SBRT | 430150U |
| Unsealed Sources Procs. | I-131 Oral | Unsealed Sources | 430141U |
| Unsealed Sources Procs. | Other - Unsealed Source | Unsealed Sources | 430146U |
| Unsealed Sources Procs. | P-32 Colloid | Unsealed Sources | 430142U |
| Unsealed Sources Procs. | Radiolabeled Drugs | Unsealed Sources | 430145U |
| Unsealed Sources Procs. | SM-153 | Unsealed Sources | 430144U |
| Unsealed Sources Procs. | SR-89 | Unsealed Sources | 430143U |
| Unsealed Sources Procs. | Yttrium 90 | Unsealed Sources | 430147U |
| I-131 Procs | I-131 Oral | Unsealed Sources | 430141U |
| PN Admin. Procs. | Other - Unsealed Source | Unsealed Sources | 430146U |
| PN Admin. Procs. | P-32 Colloid | Unsealed Sources | 430142U |
| PN Admin. Procs. | Radiolabeled Drugs | Unsealed Sources | 430145U |

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|---|---|---|---|
| PN Admin. Procs. | SM-153 | Unsealed Sources | 430144U |
| PN Admin. Procs. | SR-89 | Unsealed Sources | 430143U |
| PN Admin. Procs. | Yttrium 90 | Unsealed Sources | 430147U |