



Q&A

- Please submit all questions concerning the webinar content through the Q&A panel.
- If you have participants watching this webinar at your site, please collect their names and emails.
- We will be distributing a Q&A document in about one week. This document will fully answer questions asked during the webinar and will contain any corrections that we may discover after the webinar.



FABULOUS PRIZES



GUEST PRESENTERS

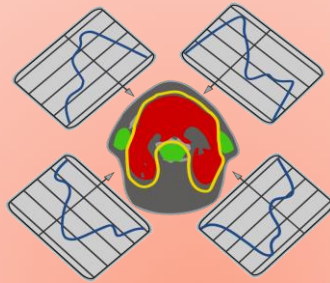
- Amanda Francescatti, MS
 - Senior manager of the Cancer Surgery Standards Program and the Cancer Research Program of the American College of Surgeon
- Wilson Apollo, MS, CTR
- Jennifer Ruhl, Chair SSDI WG, Public Health Analyst NIH/NCI SEER



AGENDA

- 2021 Radiation Therapy Coding: Challenges and Solutions
 - Wilson Apollo
- CoC Operative Standards 5.3-5.8: Updates on Resources and Compliance
 - Amanda Francescatti
- Neoadjuvant Data Items
 - Jennifer Ruhl
- Biopsy of Lymph Nodes
 - Jim Hofferkamp





2021 Radiation Therapy Coding: Challenges and Solutions

Wilson Apollo, MS, CTR

WHA Consulting

NAACCR Webinar

January 7, 2021

WHA Consulting

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Objectives

- ❖ RT Delivery systems/approaches & coding,
- ❖ Common RT coding errors,
- ❖ STORE 2021 RT items/CTR Guide
- ❖ Challenging scenarios



RT DELIVERY SYSTEMS



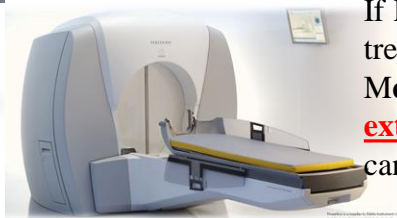
LINEAR ACCELERATOR-Linac



If the RT treatment summary refers to beam energies, such as:

- 6X or 6MV, 10X or 10MV,
- 12X or 12MV, 15X or 15MV,

Then the treatment modality will always be **02, external beam, photons** (a Linac was used to deliver the EBRT treatment).



If RT treatment summary refers to treatment delivery as E, eboost, MeV or “en face”, code it to **04: external beam, electrons** (A Linac can also deliver electron therapy).

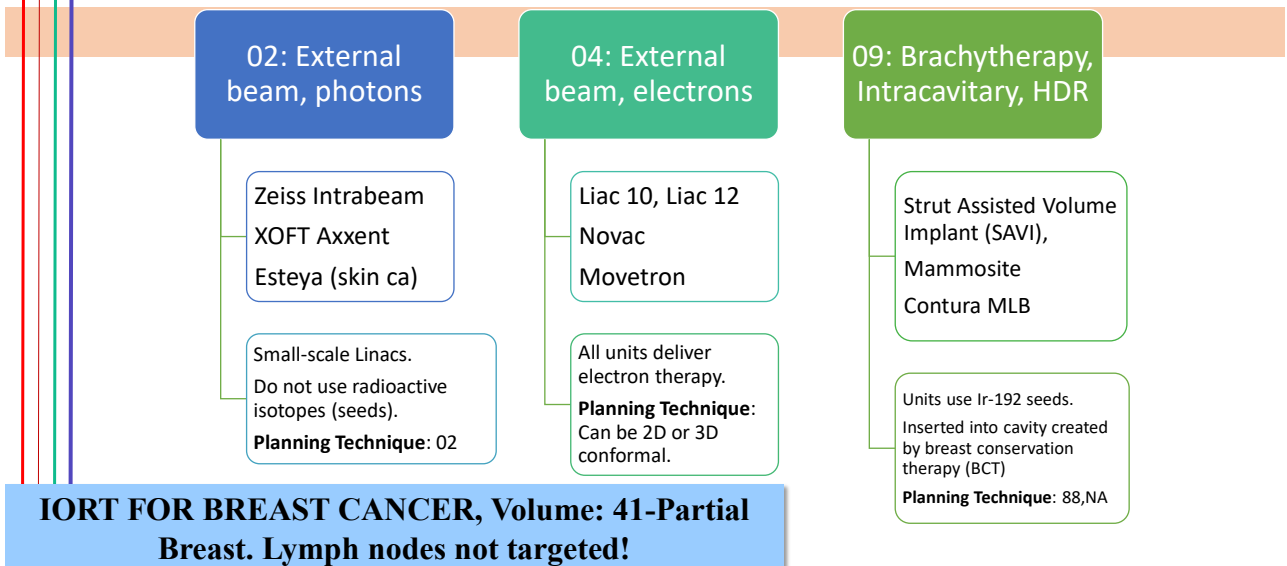


IORT Delivery Technology & Coding

| Equipment | RT Delivery Method | Treatment Modality | Planning Technique | Comments |
|--------------------------------------|----------------------|------------------------------|-------------------------------------|---|
| Zeiss Intrabeam | 50 kVp Linac | 02-Photons | 02: Low energy x-ray/photon therapy | <i>Isotope-free. No radioactive source used</i> |
| XOFT Axxent | 50 kVp Linac | 02-Photons | 02: Low energy x-ray/photon therapy | <i>Isotope-free. No radioactive source used</i> |
| LIAC 10/12 by Sordina IORT | Electron accelerator | 04-Electrons | In most cases, 04-3D conformal | <i>Max energy: 10 MeV, 12 MeV</i> |
| NOVAC by Sordina IORT | Electron accelerator | 04-Electrons | In most cases, 04-3D conformal | <i>Check with Rad Onc for planning technique</i> |
| Mobetron | Electron accelerator | 04-Electrons | In most cases, 04-3D conformal | <i>Energies: 6, 9, 12 MeV</i> |
| Strut Assisted Volume Implant (SAVI) | Ir-192 Sources (HDR) | 09-Brachy, intracavitary HDR | 88-NA | <i>Accelerated partial breast irradiation (PBI)</i> |
| Mammosite | Ir-192 Sources (HDR) | 09-Brachy, intracavitary HDR | 88-NA | <i>Accelerated partial breast irradiation (PBI)</i> |
| Contura MLB | Ir-192 Sources (HDR) | 09-Brachy, intracavitary HDR | 88-NA | <i>Accelerated partial breast irradiation (PBI)</i> |



IORT Delivery Technology & Coding



IORT FOR BREAST CANCER, Volume: 41-Partial Breast. Lymph nodes not targeted!

Zeiss INTRABEAM/XOFT Axxent eBx IORT Delivery Systems



Known as Electronic brachytherapy. Deliver low-energy **photon** therapy (50 kV range)

Modality code: 02, photons.

Planning technique: 02, Low energy x-ray/photon therapy



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RT DELIVERY SYSTEMS

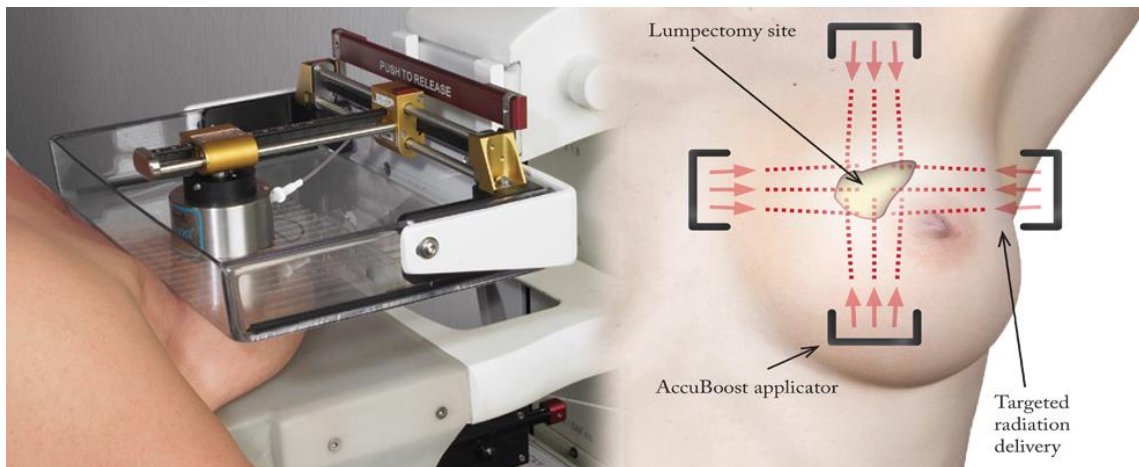
Brachytherapy

Isotopes used in brachytherapy



| Element | Isotope | Energy (MeV) | Half-Life | Clinical Application |
|-----------|-------------------|-----------------|------------|---|
| Cesium | ^{137}Cs | 0.662 | 30 years | LDR intracavitary and interstitial |
| Iridium | ^{192}Ir | 0.397 (average) | 73.8 days | LDR & HDR, interstitial and intracavitary |
| Cobalt | ^{60}Co | 1.25 | 5.26 years | HDR intracavitary |
| Iodine | ^{125}I | 0.028 | 59.6 days | LDR permanent interstitial |
| Palladium | ^{103}Pd | 0.02 | 17 days | LDR permanent interstitial |
| Cesium | ^{131}Cs | 0.03 | 9.69 days | LDR permanent |
| Ytterbium | ^{169}Yb | 0.093 | 32 days | LDR temporary interstitial |
| Gold | ^{198}Au | 0.412 | 2.7 days | LDR permanent |
| Strontium | ^{90}Sr | 0.5 | 29 yrs | HDR (beta emitter) |
| Yttrium | ^{90}Y | 2.27 (max) | 64 hrs | HDR (beta emitter) |

AccuBoost: Non-invasive Breast Brachytherapy (NIBB)



Accuboot: Non-invasive Breast Brachytherapy (NIBB)



- Allows for non-invasive approach to delivering a boost dose to lumpectomy cavity for breast cancer pts,
- Dose is delivered via **Ir-192 HDR** sources,
- Note that sources are not inserted into patient,
- Utilizes mammography for treatment planning,
- Advantage of technique is that it avoids irradiating lung, heart,
- Cosmesis is comparable to that of conventional electron & photon boost.
- How do you code this modality? Best choice: **07, Brachytherapy, NOS.**

J. Schuster, *et al.* Updated feasibility and reproducibility results of multi-institutional study of noninvasive breast tumor bed boost. *Brachytherapy* 2016; 2-8.

Brachytherapy for gyn cancers



- Use of tandem and ovoid (T&O) applicators, or tandem and ring (T&R) applicators, also used for intracavitary **LDR** (^{137}C).
- Applicators connected to remote afterloaders for delivery of HDR brachytherapy (^{192}Ir).
- Dwell time range from 15-25 min.





Vaginal Cuff Brachytherapy Ir-192

| | |
|----------------------------|--|
| Treatment Modality | 09 -Brachytherapy, intracavitary, HDR |
| Planning Technique | 88 -NA |
| Treatment Volume | 72 -Vagina |
| RT to draining lymph nodes | 00 -No RT to draining lymph nodes |
| | |

Elekta Venezia



Uses Ir-192 seeds, interstitial & Intracavitary!



Elekta Venezia Brachytherapy

- Elekta Venezia is a hybrid system that can deliver interstitial and/or intracavitary HDR brachytherapy. *If the device is used to perform interstitial HDR with a simultaneous intracavitary treatment, then code as 07, brachytherapy, NOS.*
- If treatment summary states “Vaginal Cuff Brachytherapy”, code it intracavitary.

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STORE 2021/CTR GUIDE HIGHLIGHTS

RT primary treatment Volume STORE p. 267

- Note that for many of the treatment volumes, the same code should be used when the anatomic structure is targeted or when the surgical bed of the resected anatomical structure is targeted. For example, when prostate cancer is treated with radiation alone, code 64 will be the Primary Treatment Volume. Similarly, when prostate cancer is treated with radiation alone after radical prostatectomy, code 64 will be the Primary Treatment Volume. There is an exception to the rule for breast cancer. In patients with breast cancer, code 41 (Breast-partial) in patients who have had a lumpectomy and were treated with partial breast irradiation (sometimes called accelerated partial breast irradiation, APBI). Code 40 (Breast-whole) in patients who had a lumpectomy and whole breast radiation, and code 42 (chest wall) in patients who had a mastectomy and post-mastectomy radiation.

1-Phase RT

STORE, p. 268

- If the patient received just one phase of treatment, code the phase II Radiation Treatment Volume to “00” and leave all other phase III data fields blank.
- 12/3/19-12/20/19 @ Anywhere, USA:
- VAGINAL CUFF HDR Ir-192
INTRACAVITARY
BRACHYTHERAPY. 700 cGy x 3
fx= 21 Gy.



| Seg | # | Field | Code/Definition |
|---------|----|---------------------------|-------------------------------|
| Summary | 1 | Rad/Surg Sequence | 00 No RT and/or surgical ... |
| | 2 | Reason No Rad | 0 Radiation was admin.. |
| | 3 | Location of Rad | 1 All RT at this facility |
| | 4 | Date Started/Flag | 12/03/19 |
| | 5 | Date Finished/Flag | 12/20/19 |
| | 6 | Number of Phases | 02 |
| | 7 | Discontinued Early | 01 Radiation completed |
| | 8 | Total Dose | 002100 |
| Phase 1 | 9 | RT Treatment Volume | 72 Vagina |
| | 10 | Rad to Nodes | 00 No RT |
| | 11 | Modality | 09 Brachy, intracavitary, HDR |
| | 12 | Planning Technique | 88 NA |
| | 13 | Number of Fractions | 003 |
| | 14 | Dose per Fraction | 00700 |
| | 15 | Total Phase 1 Dose | 002100 |
| Phase 2 | 16 | RT Treatment Volume | 00 |
| | 17 | Rad to Nodes | |
| | 18 | Modality | |
| | 19 | Planning Technique | |
| | 20 | Number of Fractions | |
| | 21 | Dose per Fraction | |
| | 22 | Total Phase 2 Dose | |
| Phase 3 | 23 | RT Treatment Volume | |
| | 24 | Rad to Nodes | |
| | 25 | Modality | |
| | 26 | Planning Technique | |
| | 27 | Number of Fractions | |
| | 28 | Dose per Fraction | |
| | 29 | Total Phase 3 Dose | |

2-Phase RT

STORE, p. 268

If the patient received just two phases of treatment, code the phase III Radiation Treatment Volume to “00” and leave all other phase III data fields blank.

6/1/20-7/13/20 @ Anywhere/USA:

1. RT BREAST, 15X/6X/3D, 2.0 Gy x 25 fx= 50 Gy.

2. RT BREAST BOOST, 6X/3D, 2 Gy x 5 fx= 10 Gy.

TOTAL DOSE= 60 Gy.

| Descriptive Name | Field Value |
|------------------------------------|---|
| Location of Radiation Treatment | (1) All radiation treatment at this facility |
| Date RT Started | 06/01/2020 |
| Date RT Ended | 07/13/2020 |
| Phase I Radiation Primary Tre... | (40) Breast - whole |
| Phase I Radiation to Draining ... | (00) No radiation treatment |
| Phase I Radiation Treatment M... | (02) External beam, photons |
| Phase I Radiation External Be... | (04) Conformal or 3-D conformal therapy |
| Phase I Dose per Fraction | (00200) |
| Phase I Number of Fractions | (025) |
| Phase I Total Dose | (005000) |
| Phase II Radiation Primary Tre... | (41) Breast - partial |
| Phase II Radiation to Draining ... | (00) No radiation treatment to draining lymph nodes |
| Phase II Radiation Treatment ... | (02) External beam, photons |
| Phase II Radiation External Be... | (04) Conformal or 3-D conformal therapy |
| Phase II Dose per Fraction | (00200) |
| Phase II Number of Fractions | (005) |
| Phase II Total Dose | (001000) |
| Phase III Radiation Primary Tr... | (00) No radiation treatment |
| Phase III Radiation to Draining... | |
| Phase III Radiation Treatment ... | |
| Phase III Radiation External Be... | |
| Phase III Dose per Fraction | |
| Phase III Number of Fractions | |
| Phase III Total Dose | |

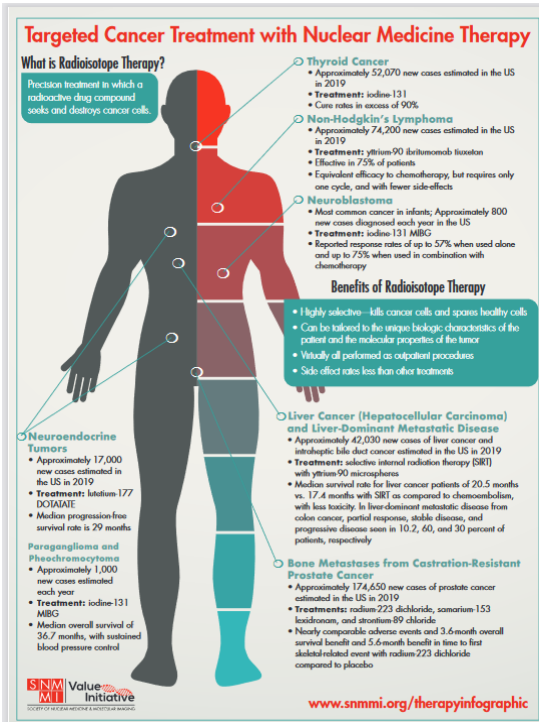


Radiation Treatment Modality

STORE, p. 275, 3rd bullet



- *Use code 13-Radioisotopes, NOS for radioembolization procedures, e.g. intravascular Yttrium-90 for cases diagnosed January 1, 2019 and later...*
- Apply this rule to targeted radionuclide therapy, molecular radiotherapy, radio-pharmaceuticals (RPs), alpha radioimmunotherapy, SIRT (Selective Internal Radiation Therapy).
- Numerous radionuclide available and site specific.
- Do not confuse with diagnostic radiopharmaceuticals:
 - Thallium-201, chloride, or Tc-99 is used for myocardial perfusion imaging,
 - FDG, incorporating F18, used for PET/CT imaging



Code 13-Radioisotopes, NOS

- Diagram identifies most commonly used radionuclides for **therapeutic** purpose. Among these:
 - Yttrium90,
 - I-131
 - Radium 223
 - Strontium-89
 - Lutetium-177

- <https://s3.amazonaws.com/rdcms-snmml/files/production/public/images/2020%20TRT%20Infographic%20%281%29.pdf>

Radiation Treatment Modality

RADIOISOTOPES



- Do not overlook following codes:

| CODE | LABEL |
|------|-----------------------------|
| 14 | Radioisotopes, Radium-223 |
| 15 | Radioisotopes, Strontium-89 |
| 16 | Radioisotopes, Strontium-90 |

STORE p. 281 (on dose/fx): Code 99998 when radioisotopes were administered to the patient (codes 13-16) for Phase I-III...

- **Plaque radiotherapy** or episcleral plaque radiotherapy (also referred to as episcleral plaque brachytherapy, EPBRT):
 - Use of radioactive seeds (I-125) in a plaque sewn to the eyeball, temporarily, for management of retinoblastoma, uveal melanoma.
 - Code to **07-Brachytherapy, NOS**



COMMON RT CODING ERRORS



Treatment Modality code

- Treatment summary refers to beam energy such as 6X, 12 MV.
- CTR codes treatment modality to **01**: External beam, NOS- **Incorrect!**
- The X or MV in the treatment summary tells us that photon therapy was delivered. Treatment modality code should be **02: External beam, photons**

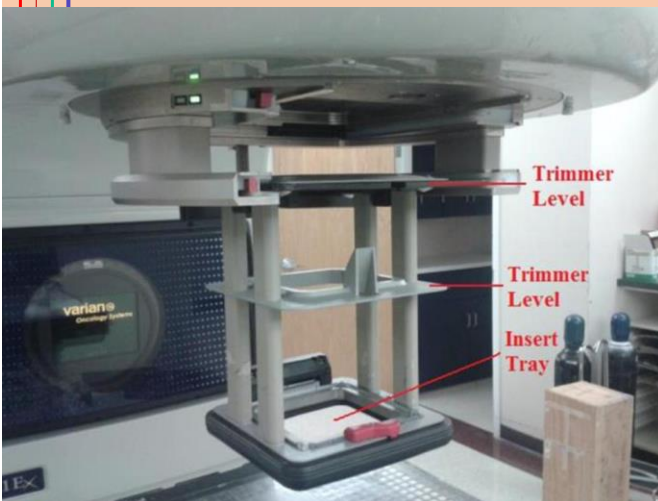


Planning Technique code

- Treatment summary refers to planning technique as IMRT/VMAT/SBRT. 1200 cGy x 3 fx.
- CTR codes planning technique to 05: IMRT- **Incorrect!**
- VMAT refers to rotational/arc therapy. When used w/ conventional fractionation, code to 05: IMRT
- When delivered via SBRT w/ hypofractionation, code to **06: Stereotactic radiotherapy or radiosurgery, NOS**



“En Face” technique



- “en face” refers to electron therapy.
- Treatment modality code is **04: Electrons**
- Most electron boost are 3D conformal (04). Check with your facility for the policy on these.



FnF (Field-in-Field), e-comp

- Treatment technique coded to 01: External beam, NOS – **Incorrect!**
- If the treatment summary alludes to FnF or e-comp for the planning technique, code to 04: 3D Conformal.

Total Dose Summary for Simultaneous Integrated Boost (SIB)



- Pt w/ base of tongue SCC treated w/ EBRT/VMAT:

| Txt Site | Energy | Dose/Fx (cGy) | Fractions | Total Dose (cGy) |
|------------------------------------|--------|---------------|-----------|------------------|
| PTVp1_70Gy. Primary & LN | 6X | 200 | 35 | 7000 |
| PTVp_66.5Gy Primary subclinical | 6X | 190 | 35 | 6650 |
| PTVn_60Gy RT neck | 6X | 171 | 35 | 5895 |
| PTVn_56Gy LT neck | 6X | 160 | 35 | 5600 |



Total Dose Summary for SIB

| # | Field | Code/Definition |
|---|--------------------|----------------------------|
| 1 | Rad/Surg Sequence | 0 No radiation and/or surg |
| 2 | Reason no RT | 0 RT was administered |
| 3 | Location of RT | 1 All RT at this facility |
| 4 | Date Started/Flag | 10/23/20 |
| 5 | Date Finished/Flag | 12/17/20 |
| 6 | Number of Phases | 3 |
| 7 | Discontinued Early | 01 RT completed |
| 8 | Total Dose | 025145 |

- CTR codes total dose and number of phases as follows:

of phases incorrect.

Total Dose incorrect



Total Dose Summary for SIB

- Correct codes:
- While we can only capture and code three phases, we must enter the total # of phases in item #6.
- When Simultaneous Integrated Boost (SIB) is used, the total dose entered in item #8 is the highest PTV dose delivered. Do not add the dose for each PTV to get the total dose.

| # | Field | Code/Definition |
|---|--------------------|----------------------------|
| 1 | Rad/Surg Sequence | 0 No radiation and/or surg |
| 2 | Reason no RT | 0 RT was administered |
| 3 | Location of RT | 1 All RT at this facility |
| 4 | Date Started/Flag | 10/23/20 |
| 5 | Date Finished/Flag | 12/17/20 |
| 6 | Number of Phases | 4 |
| 7 | Discontinued Early | 01 RT completed |
| 8 | Total Dose | 007000 |



Irradiated volume: CNS-Glioblastoma multiforme

- 65 y/o male who presented to ER w/ RT focal arm seizures, unsteady gait, loss of balance, short-term memory loss. Pt denies nausea, vomiting, headaches.
- Brain resection: glioblastoma, IDH Wild-type, WHO grade 2.
- Prescribed concurrent temozolomide + EBRT/VMAT

| Site | Energy | Dose/fx (cGy) | # fx | Total dose (cGy) | Start | End |
|--------------|--------|---------------|-----------|------------------|--------|---------|
| Brain 4600 | 6X | 200 | 23 | 4,600 | 8/3/20 | 9/2/20 |
| Brain CD6000 | 6X | 200 | 7 | 1,400 | 9/3/20 | 9/14/20 |
| Total | | | 30 | 6,000 | | |

Case - GBM

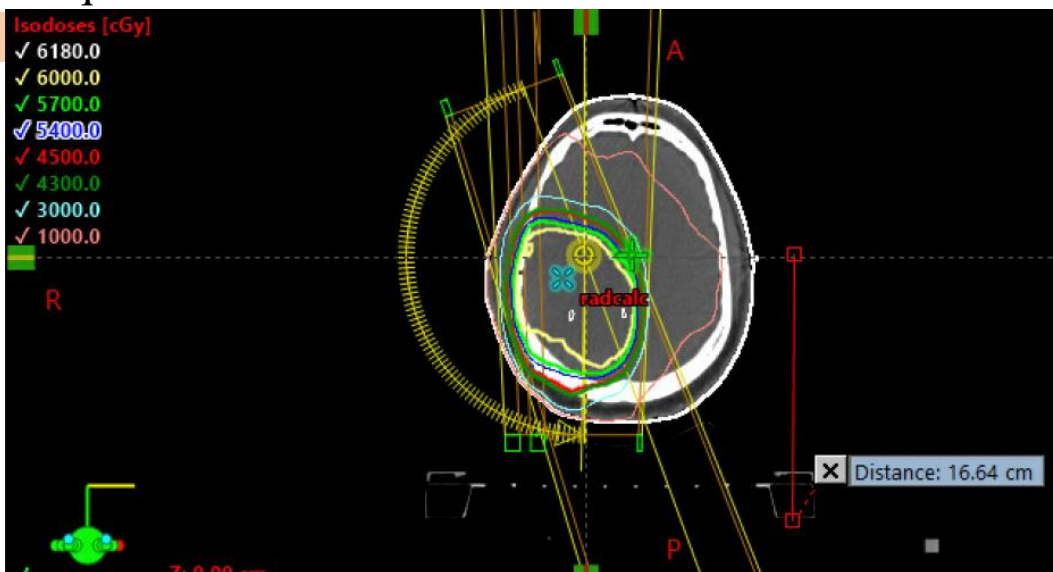
| Seg | # | Field | Code/Definition |
|---------|----|--------------------------|----------------------------------|
| Summary | 1 | Rad/Surg Sequence | 3 Radiation after surgery |
| | 2 | Reason No Rad | 0 Radiation was admin.. |
| | 3 | Location of Rad | 1 All RT at this facility |
| | 4 | Date RT Started/Flag | 08/03/20 |
| | 5 | Date RT Ended/Flag | 09/14/20 |
| | 6 | Number of Phases of RT | 02 |
| | 7 | RT Discontinued Early | 01 Radiation completed |
| | 8 | Total Dose | 006000 |
| Phase 1 | 9 | Primary Treatment Volume | 12 Whole brain |
| | 10 | Rad to Draining LNs | 00 No RT to draining lymph nodes |
| | 11 | Treatment Modality | 02 External beam, photons |
| | 12 | Planning Technique | 05 IMRT |
| | 13 | Dose per Fraction | 00200 |
| | 14 | Number of Fractions | 023 |
| | 15 | Phase I Total Dose | 004600 |
| Phase 2 | 16 | Primary Treatment Volume | 12 Whole brain |
| | 17 | Rad to Draining LNs | 00 No RT to draining lymph nodes |
| | 18 | Treatment Modality | 02 External beam, photons |
| | 19 | Planning Technique | 05 IMRT |
| | 20 | Dose per Fraction | 00200 |
| | 21 | Number of Fractions | 007 |
| | 22 | Phase II Total Dose | 001400 |
| Phase 3 | 23 | Primary Treatment Volume | 00 |
| | 24 | Rad to Draining LNs | |
| | 25 | Treatment Modality | |
| | 26 | Planning Technique | |
| | 27 | Dose per Fraction | |
| | 28 | Number of Fractions | |
| | 29 | Phase III Total Dose | |

CTR coded irradiated volume for both phases to 12: Whole brain.

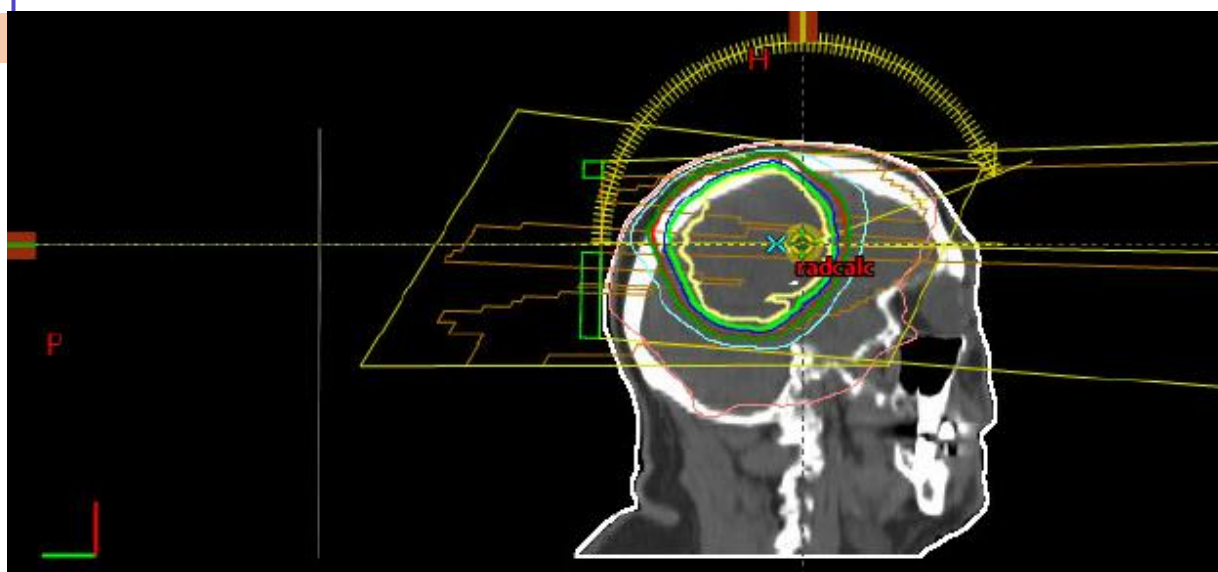
Incorrect!



Clinical Scenario 2: Treatment planning images. Mosaiq/ARIA



Clinical Scenario 2: Treatment planning images- Mosaiq/ARIA





Clinical Scenario 2: Interpreting treatment planning information

Energy: 6X
 Gantry: 340 CCW to 181
 Collim.: 350 Couch: 0
 SSD: 92.94 Avg. Depth: 5.84
 SSD @ Iso: 92.52 Avg. Eff. Depth: 5.84
 Eq. Sq.: 8.80 ALPO: 4.58

Planning modality= 02, photons

CCW: counterclockwise, indicative of rotational therapy (VMAT). Gives range of rotation/arc.
 CW: Clockwise

Information confirms IMRT planning technique (05)!

Energy: 6X
 Gantry: 181 CW to 340
 Collim.: 10 Couch: 270
 SSD: 93.41 Avg. Depth: 8.03
 SSD @ Iso: 89.89 Avg. Eff. Depth: 8.03
 Fr. Sn.: 9.40 ALPO: 5.17

Case - GBM

| Seg | # | Field | Code/Definition |
|---------|----|--------------------------|----------------------------------|
| Summary | 1 | Rad/Surg Sequence | 3 Radiation after surgery |
| | 2 | Reason No Rad | 0 Radiation was admin.. |
| | 3 | Location of Rad | 1 All RT at this facility |
| | 4 | Date RT Started/Flag | 08/03/20 |
| | 5 | Date RT Ended/Flag | 09/14/20 |
| | 6 | Number of Phases of RT | 02 |
| | 7 | RT Discontinued Early | 01 Radiation completed |
| | 8 | Total Dose | 006000 |
| Phase 1 | 9 | Primary Treatment Volume | 13 Brain (limited) |
| | 10 | Rad to Draining LNs | 00 No RT to draining lymph nodes |
| | 11 | Treatment Modality | 02 External beam, photons |
| | 12 | Planning Technique | 05 IMRT |
| | 13 | Dose per Fraction | 00200 |
| | 14 | Number of Fractions | 023 |
| | 15 | Phase I Total Dose | 004600 |
| Phase 2 | 16 | Primary Treatment Volume | 13 Brain (limited) |
| | 17 | Rad to Draining LNs | 00 No RT to draining lymph nodes |
| | 18 | Treatment Modality | 02 External beam, photons |
| | 19 | Planning Technique | 05 IMRT |
| | 20 | Dose per Fraction | 00200 |
| | 21 | Number of Fractions | 007 |
| | 22 | Phase II Total Dose | 001400 |
| Phase 3 | 23 | Primary Treatment Volume | 00 |
| | 24 | Rad to Draining LNs | |
| | 25 | Treatment Modality | |
| | 26 | Planning Technique | |
| | 27 | Dose per Fraction | |
| | 28 | Number of Fractions | |
| | 29 | Phase III Total Dose | |



Correct Coding:

#6: There are two separate volumes being irradiated, which makes each a separate phase.

#9/16: Reviewing planning images can assist us in determining irradiated volumes. In general, irradiated brain volume is limited when treating gliomas. Do not use code 12 (whole brain)

#12/19: VMAT was clearly specified. In addition, planning information refers to rotational therapy.

#16: Cone down (CD) boost focuses on small volume within the primary site.



Electronic brachytherapy

- Treatment summary: Following RT breast lumpectomy, pt undergoes IORT via electronic brachytherapy with Zeiss Intrabeam, to a total dose of 20 Gy.
- CTR codes as follows:
 - Treatment modality= 12-Brachytherapy, electronic
 - Planning technique= 88-NA, treatment not by external beam.
 - Total dose= 999998

Incorrect!

Zeiss INTRABEAM Electronic Brachytherapy



Because of the manner in which the x-rays are generated in this system (very much like a linac), and taking into account the low photon energies produced, this treatment modality *should be coded 02, external beam, photons.*

Planning Technique: *02, low energy x-ray/photon therapy.*





Electronic brachytherapy

- Should be coded as follows:
 - Treatment modality= **02** – **External beam, photons**
 - Planning technique= **02** – **Low energy x-ray/photon therapy**
 - Total dose= **002000**



CHALLENGING SCENARIOS

Thyroid Radioablative Therapy

- Nuclear medicine thyroid med uptake scan:

“After the oral administration of **4.2 mCi I-131** sodium iodide, anterior and posterior whole-body images were performed at 48 hours. Radioiodine uptake was measured and calculated at 48 hours”

Therapeutic or diagnostic dose??

Thyroid Radioablative Therapy 1



- 6/2/20 @ XXX: I-131 RADIOABLATIVE THERAPY FOR METS THYROID CA. ACTIVITY= **150.1 mCi** IN CAPSULE FORM.

| Descriptive Name | Field Value |
|--|--|
| M Location of Radiation Treatment | 1 |
| Date RT Started | 06/02/2020 |
| Date RT Ended | 06/02/2020 |
| M Phase I Radiation Primary Tre... | (98) Other |
| M Phase I Radiation to Draining ... | (00) No radiation treatment |
| M Phase I Radiation Treatment M... | (13) Radioisotopes, NOS |
| M Phase I Radiation External Be... | (88) Not Applicable |
| Phase I Dose per Fraction | (99998) Not applicable, radioisotopes administered to the patient |
| Phase I Number of Fractions | (001) |
| Phase I Total Dose | (999998) Not applicable, radioisotopes administered to the patient |
| M Phase II Radiation Primary Tre... | (00) No radiation treatment |



Thyroid Radioablative Therapy 2

- 2/12/20 @ YYY: IODINE-131 CAPSULE ABLATIVE THYROID TREATMENT.
29 mCi.

| Descriptive Name | Field Value |
|--|--|
| M Location of Radiation Treatment | 1 |
| Date RT Started | 02/12/2020 |
| Date RT Ended | 02/12/2020 |
| M Phase I Radiation Primary Tre... | (98) Other |
| M Phase I Radiation to Draining ... | (00) No radiation treatment |
| M Phase I Radiation Treatment M... | (13) Radioisotopes, NOS |
| M Phase I Radiation External Be... | (88) Not Applicable |
| M Phase I Dose per Fraction | (99998) Not applicable, radioisotopes administered to the patient |
| M Phase I Number of Fractions | (001) |
| M Phase I Total Dose | (999998) Not applicable, radioisotopes administered to the patient |
| M Phase II Radiation Primary Tre... | (00) No radiation treatment |

Thyroid Radioablative Therapy

- **Diagnostic** levels of I-131 typically < 5 mCi
- **Therapeutic** levels of I-131 > 20 mCi.

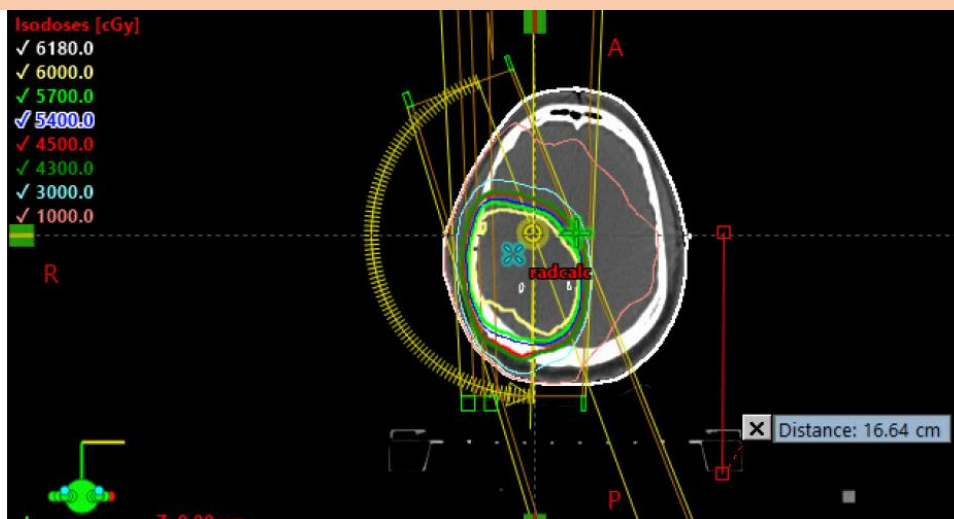


Clinical Scenario 1: CNS-Glioblastoma multiforme

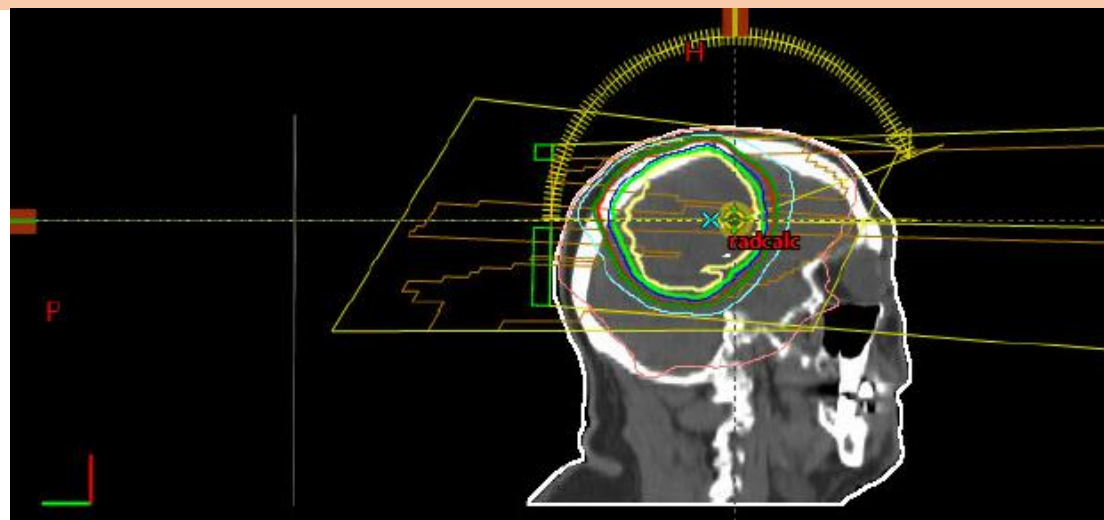
- 65 y/o male who presented to ER w/ RT focal arm seizures, unsteady gait, loss of balance, short-term memory loss. Pt denies nausea, vomiting, headaches.
- Brain resection: glioblastoma, IDH Wild-type, WHO grade 2.
- Prescribed concurrent temozolomide + EBRT/VMAT

| Site | Energy | Dose/fx (cGy) | # fx | Total dose (cGy) | Start | End |
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| Brain 4600 | 6X | 200 | 23 | 4,600 | 8/3/20 | 9/2/20 |
| Brain CD6000 | 6X | 200 | 7 | 1,400 | 9/3/20 | 9/14/20 |
| Total | | | 30 | 6,000 | | |

Clinical Scenario 1: Treatment planning images. Mosaiq/ARIA



Clinical Scenario 1: Treatment planning images- Mosaik/ARIA



Clinical Scenario 1: Interpreting treatment planning information in Mosaik or ARIAS



Energy: 6X
 Gantry: 340 CCW to 181
 Collim.: 350 Couch: 0
 SSD: 92.94 Avg. Depth: 5.84
 SSD @ Iso: 92.52 Avg. Eff. Depth: 5.84
 Eq. Sq.: 8.80 ALPO: 4.58

Planning modality= 02, photons

CCW: counterclockwise, indicative of rotational therapy (VMAT). Gives range of rotation/arc.
 CW: Clockwise

Information confirms IMRT planning technique (05)!

Energy: 6X
 Gantry: 181 CW to 340
 Collim.: 10 Couch: 270
 SSD: 93.41 Avg. Depth: 8.03
 SSD @ Iso: 89.89 Avg. Eff. Depth: 8.03
 Eq. Sq.: 9.40 ALPO: 5.12



Case 1- GBM

| Seg | # | Field | Code/Definition |
|---------|----|--------------------------|----------------------------------|
| Summary | 1 | Rad/Surg Sequence | 3 Radiation after surgery |
| | 2 | Reason No Rad | 0 Radiation was admin.. |
| | 3 | Location of Rad | 1 All RT at this facility |
| | 4 | Date RT Started/Flag | 08/03/20 |
| | 5 | Date RT Ended/Flag | 09/14/20 |
| | 6 | Number of Phases of RT | 02 |
| | 7 | RT Discontinued Early | 01 Radiation completed |
| | 8 | Total Dose | 006000 |
| Phase 1 | 9 | Primary Treatment Volume | 13 Brain (limited) |
| | 10 | Rad to Draining LNs | 00 No RT to draining lymph nodes |
| | 11 | Treatment Modality | 02 External beam, photons |
| | 12 | Planning Technique | 05 IMRT |
| | 13 | Dose per Fraction | 00200 |
| | 14 | Number of Fractions | 023 |
| | 15 | Phase I Total Dose | 004600 |
| Phase 2 | 16 | Primary Treatment Volume | 13 Brain (limited) |
| | 17 | Rad to Draining LNs | 00 No RT to draining lymph nodes |
| | 18 | Treatment Modality | 02 External beam, photons |
| | 19 | Planning Technique | 05 IMRT |
| | 20 | Dose per Fraction | 00200 |
| | 21 | Number of Fractions | 007 |
| | 22 | Phase II Total Dose | 001400 |
| Phase 3 | 23 | Primary Treatment Volume | 00 |
| | 24 | Rad to Draining LNs | |
| | 25 | Treatment Modality | |
| | 26 | Planning Technique | |
| | 27 | Dose per Fraction | |
| | 28 | Number of Fractions | |
| | 29 | Phase III Total Dose | |

Case 1 Rationale:

#6: There are two separate volumes being irradiated, which makes each a separate phase.

#9/16: Reviewing planning images can assist us in determining irradiated volumes. In general, irradiated brain volume is limited when treating gliomas. Do not use code 12 (whole brain)

#12/19: VMAT was clearly specified. In addition, planning information refers to rotational therapy.

#16: Cone down (CD) boost focuses on small volume within the primary site.

Clinical Scenario 2a-Prostate VMAT & SBRT

STORE 2018-2020



- 67 y.o. male with high risk prostatic adenocarcinoma (cT3a by MRI (suspicious for EPE), Gleason 4+3=7, 14/17 total cores, PSA 14.5). Underwent prostatectomy & was referred for radiation therapy. How would you code the VMAT (05) & SBRT/SRS (06)?

| Site | Dose (cGy) | FxDose (cGy) | Fx | Technique | Start | End |
|------------------|------------|--------------|-------|-----------|---------|---------|
| Tumor bed/pelvis | 4,500 | 180 | 25/25 | VMAT | 5/14/19 | 6/18/19 |
| Tumor bed CD | 1,950 | 650 | 3/3 | VMAT/SBRT | 6/19/19 | 6/25/19 |

Case 2a- Prostate

| Seg | # | Field | Code/Definition |
|----------|--------------------|---------------------|----------------------------|
| /Summary | 1 | Rad/Surg Sequence | 0 No radiation and/or sur |
| | 2 | Reason No Rad | 0 Radiation was admin.. |
| | 3 | Location of Rad | 01 All RT at this facility |
| | 4 | Date Started/Flag | 05/14/2019 |
| | 5 | Date Finished/Flag | 06/25/2019 |
| | 6 | Number of Phases | 02 |
| | 7 | Discontinued Early | 01 Radiation completed |
| | 8 | Total Dose | 006540 |
| Phase 1 | 9 | Volume | 86 Pelvis |
| | 10 | Rad to Nodes | 06 Pelvic lymph nodes |
| | 11 | Modality | 02 External beam, photons |
| | 12 | Planning Technique | 05 IMRT |
| | 13 | Number of Fractions | 025 |
| | 14 | Dose per Fraction | 00180 |
| | 15 | Total Phase 1 Dose | 005040 |
| Phase 2 | 16 | Volume (boost) | 86 Pelvis |
| | 17 | Rad to Nodes | 00 No RT to draining LNs |
| | 18 | Modality | 02 External beam, photons |
| | 19 | Planning Technique | 06 SBRT |
| | 20 | Number of Fractions | 003 |
| | 21 | Dose per Fraction | 00650 |
| | 22 | Total Phase 2 Dose | 001950 |
| Phase 3 | 23 | Volume | 00 |
| | 24 | Rad to Nodes | |
| | 25 | Modality | |
| | 26 | Planning Technique | |
| | 27 | Number of Fractions | |
| | 28 | Dose per Fraction | |
| 29 | Total Phase 3 Dose | | |

**Case 2a Rationale:**

#8: Sum of all phases.

#10: Pelvis is mentioned, which means that the regional lymph nodes are included/targeted in the irradiated field.

#12: VMAT= IMRT

#17: When SBRT is used, lymphatics are not included.

#19: When VMAT (or IMRT) and SBRT are mentioned in the treatment summary for a phase, select SBRT (06)

Clinical Scenario 2b-Prostate VMAT & SBRT

STORE 2021+



- 67 y.o. male with high risk prostatic adenocarcinoma (cT3a by MRI (suspicious for EPE), Gleason 4+3=7, 14/17 total cores, PSA 14.5). Underwent prostatectomy & was referred for radiation therapy. How would you code the VMAT (05) & SBRT/SRS (06)?

| Site | Dose (cGy) | FxDose (cGy) | Fx | Technique | Start | End |
|------------------|------------|--------------|-------|-----------|---------|---------|
| Tumor bed/pelvis | 4,500 | 180 | 25/25 | VMAT | 5/14/21 | 6/18/21 |
| Tumor bed CD | 1,950 | 650 | 3/3 | VMAT/SBRT | 6/19/21 | 6/25/21 |

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Case 2b- Prostate

| Seg | # | Field | Code/Definition |
|----------|----|---------------------|----------------------------|
| /Summary | 1 | Rad/Surg Sequence | 0 No radiation and/or sur |
| | 2 | Reason No Rad | 0 Radiation was admin.. |
| | 3 | Location of Rad | 01 All RT at this facility |
| | 4 | Date Started/Flag | 05/14/2021 |
| | 5 | Date Finished/Flag | 06/25/2021 |
| | 6 | Number of Phases | 02 |
| | 7 | Discontinued Early | 01 Radiation completed |
| | 8 | Total Dose | 006540 |
| Phase 1 | 9 | Volume | 64 Prostate-whole |
| | 10 | Rad to Nodes | 06 Pelvic lymph nodes |
| | 11 | Modality | 02 External beam, photons |
| | 12 | Planning Technique | 05 IMRT |
| | 13 | Number of Fractions | 025 |
| | 14 | Dose per Fraction | 00180 |
| | 15 | Total Phase 1 Dose | 005040 |
| Phase 2 | 16 | Volume (boost) | 64 Prostate-whole |
| | 17 | Rad to Nodes | 00 No RT to draining LNs |
| | 18 | Modality | 02 External beam, photons |
| | 19 | Planning Technique | 06 SBRT |
| | 20 | Number of Fractions | 003 |
| | 21 | Dose per Fraction | 00650 |
| | 22 | Total Phase 2 Dose | 001950 |
| Phase 3 | 23 | Volume | 00 |
| | 24 | Rad to Nodes | |
| | 25 | Modality | |
| | 26 | Planning Technique | |
| | 27 | Number of Fractions | |
| | 28 | Dose per Fraction | |
| | 29 | Total Phase 3 Dose | |

**Case 2b (2021) Rationale:**

#8: Sum of all phases.

#10: Pelvis is mentioned, which means that the regional lymph nodes are included/targeted in the irradiated field.

#12: VMAT= IMRT

#17: When SBRT is used, lymphatics are not included.

#19: When VMAT (or IMRT) and SBRT are mentioned in the treatment summary for a phase, select SBRT (06)

Clinical Scenario 3a: Endometrial cancer 2019 case



- 67 y/o pt, presented w/ postmenopausal bleeding w/ positive findings on endometrial bx. Pt underwent TAH/BSO with pelvic lymphadenectomy.
- Pathology revealed 6.5 cm endometrioid adenocarcinoma with 89% Myometrial invasion, high histologic grade. Involvement of uterine serosa, upper endocervix with positive margins on inf endocervical. LVI-. Pelvic LNs = 0/11 neg. Stage pT3b, N0.
- Pt underwent concurrent cisplatin/RT followed by carboplatin + paclitaxel.

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Clinical Scenario 3a: Endometrial cancer

• Radiation Therapy Treatment Summary:

| Txt Site | Total Dose | Modality | Fx | Start date | End date |
|--------------|------------|----------|----|------------|----------|
| Whole pelvis | 4500 cGy | 6X/IMRT | 25 | 1/7/19 | 2/11/19 |
| Vaginal cuff | 1200 cGy | Ir-192 | 2 | 2/13/19 | 2/18/19 |

- “Whole Pelvis” implies RT to primary site or tumor bed **and** regional lymph nodes.
- “Vagina cuff” implies intracavitary brachytherapy.

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Case 3a: Endometrial

| Seg | # | Field | Code/Definition |
|---------|----|---------------------|--------------------------------------|
| Summary | 1 | Rad/Surg Sequence | 3 Radiation after surgery |
| | 2 | Reason No Rad | 0 Radiation was administered |
| | 3 | Location of Rad | 1 All RT at this facility |
| | 4 | Date Started/Flag | 01/07/19 |
| | 5 | Date Finished/Flag | 02/18/19 |
| | 6 | Number of Phases | 02 |
| | 7 | Discontinued Early | 01 Completed |
| | 8 | Total Dose | 999998 |
| Phase 1 | 9 | Volume | 86 Pelvis |
| | 10 | Rad to Nodes | 06 Pelvic lymph nodes |
| | 11 | Modality | 02 External beam, photons |
| | 12 | Planning Technique | 05 IMRT |
| | 13 | Number of Fractions | 025 |
| | 14 | Dose per Fraction | 00180 |
| | 15 | Total Phase 1 Dose | 004500 |
| Phase 2 | 16 | Volume | 72 Vagina |
| | 17 | Rad to Nodes | 00 No RT to draining LNs |
| | 18 | Modality | 09 Brachytherapy, intracavitary, HDR |
| | 19 | Planning Technique | 88 NA |
| | 20 | Number of Fractions | 02 |
| | 21 | Dose per Fraction | 00600 |
| | 22 | Total Phase 2 Dose | 001200 |
| Phase 3 | 23 | Volume | 00 |
| | 24 | Rad to Nodes | |
| | 25 | Modality | |
| | 26 | Planning Technique | |
| | 27 | Number of Fractions | |
| | 28 | Dose per Fraction | |
| | 29 | Total Phase 3 Dose | |

Case 3a Rationale(2019):

- #8: You cannot add dose from brachytherapy procedure with EBRT dose.
- #9: Phases in chronological order. If primary site in pelvic region is surgically removed, code to 86.
- #10: RT treatment summary clearly states that the whole pelvis was irradiated. This includes regional LNs.
- #16: When intracavitary HDR brachytherapy is administered to the vaginal cuff for endometrial cancer or cervical cancer, post TAH/BSO, primary treatment volume is Vagina.



Clinical Scenario 3b: Endometrial cancer STORE 2021



- 67 y/o pt, presented w/ postmenopausal bleeding w/ positive findings on endometrial bx. Pt underwent TAH/BSO with pelvic lymphadenectomy.
- Pathology revealed 6.5 cm endometrioid adenocarcinoma with 89% Myometrial invasion, high histologic grade. Involvement of uterine serosa, upper endocervix with positive margins on inf endocervical. LVI-. Pelvic LNs = 0/11 neg. Stage pT3b, N0.
- Pt underwent concurrent cisplatin/RT followed by carboplatin + paclitaxel.

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Clinical Scenario 3: Endometrial cancer 2021 case



• Radiation Therapy Treatment Summary:

| Txt Site | Total Dose | Modality | Fx | Start date | End date |
|--------------|------------|----------|----|------------|----------|
| Whole pelvis | 4500 cGy | 6X/IMRT | 25 | 1/7/21 | 2/11/21 |
| Vaginal cuff | 1200 cGy | Ir-192 | 2 | 2/13/21 | 2/18/21 |

- “Whole Pelvis” implies RT to primary site or tumor bed **and** regional lymph nodes.
- “Vaginal cuff” implies intracavitary brachytherapy.

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Case 3b: Endometrial

| Seg | # | Field | Code/Definition |
|---------|----|---------------------|--------------------------------------|
| Summary | 1 | Rad/Surg Sequence | 3 Radiation after surgery |
| | 2 | Reason No Rad | 0 Radiation was administered |
| | 3 | Location of Rad | 1 All RT at this facility |
| | 4 | Date Started/Flag | 01/07/21 |
| | 5 | Date Finished/Flag | 02/18/21 |
| | 6 | Number of Phases | 02 |
| | 7 | Discontinued Early | 01 Completed |
| | 8 | Total Dose | 999998 |
| Phase 1 | 9 | Volume | 71 Uterus or cervix |
| | 10 | Rad to Nodes | 06 Pelvic lymph nodes |
| | 11 | Modality | 02 External beam, photons |
| | 12 | Planning Technique | 05 IMRT |
| | 13 | Number of Fractions | 025 |
| | 14 | Dose per Fraction | 00180 |
| | 15 | Total Phase 1 Dose | 004500 |
| Phase 2 | 16 | Volume | 72 Vagina |
| | 17 | Rad to Nodes | 00 No RT to draining LNs |
| | 18 | Modality | 09 Brachytherapy, intracavitary, HDR |
| | 19 | Planning Technique | 88 NA |
| | 20 | Number of Fractions | 02 |
| | 21 | Dose per Fraction | 00600 |
| | 22 | Total Phase 2 Dose | 001200 |
| Phase 3 | 23 | Volume | 00 |
| | 24 | Rad to Nodes | |
| | 25 | Modality | |
| | 26 | Planning Technique | |
| | 27 | Number of Fractions | |
| | 28 | Dose per Fraction | |
| | 29 | Total Phase 3 Dose | |

Case 3b Rationale(2021):

#8: You cannot add dose from brachytherapy procedure with EBRT dose.

#9: Phases in chronological order. For cases diagnosed 2021 forward, if primary site in pelvic region is surgically removed, code to resected primary site.

#10: RT treatment summary clearly states that the whole pelvis was irradiated. This includes regional LNs.

#16: When intracavitary HDR brachytherapy is administered to the vaginal cuff for endometrial cancer or cervical cancer, post TAH/BSO, primary treatment volume is Vagina.



Radiation Oncology Working Group, Commission on Cancer

- John Christodouleas, MD, MPH
 - Dept. of Radiation Oncology
- Hospital of the Univ. of Pennsylvania
 - Medical Affairs, Elekta, Inc.
- Ted Williamson, MD, PhD, CTR
 - Salem Health Radiation Oncology (Emeritus)
 - Medical Director, Onco, Inc.
 - Wilson Apollo, MS, CTR
 - WHA Consulting
- Susanne Kessler, MSM, RHIT, CTR
- Manager, NCDB Information and Data Standards
 - Commission on Cancer





Resources

Dr. John Cristodouleas, radiation oncologist, has an informative webinar (**free**) on the RT items, interpreting RT prescriptions, treatment modality, planning techniques, just to name a few.

<https://www.facs.org/Quality-Programs/Cancer/NCDB>

Resources

[CoC Quality of Care Measures](#)

[Rapid Cancer Reporting System \(RCRS\)](#)

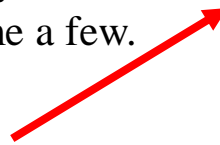
[CTR Guide to Coding Radiation Therapy Treatment in the STORE](#)

[Rationale for Radiation Oncology Data Items in STORE](#)

[Standards for Oncology Registry Entry \(STORE\)](#)

[STORE Addendum](#)

[Non-CoC Manuals and Coding Tools](#)



Resources



- Dr. Ted Williamson will be contributing a presentation on the upcoming CTR Guide revisions, highlighting some of the new case scenarios (also free).
- Tentative publication date: January 2021

STORE 2021, p.270

| | | |
|----|---------|---|
| 26 | Thyroid | Treatment is directed at all or a portion of the thyroid. Code this volume when the thyroid is treated with I-131 radioisotope. |
|----|---------|---|

- Upcoming revision to this entry (oversight). I-131 treatment to thyroid **should be coded to 98-Other**, as previously instructed.



CoC Operative Standards 5.3-5.8: Updates on Resources and Compliance

Amanda Francescatti, MS
Senior Manager, Cancer Surgery Standards Program

NAACCR Treatment Webinar— January 7, 2021

Cancer Surgery Standards Program Overview

Mission

To improve the quality of surgical care for persons with cancer

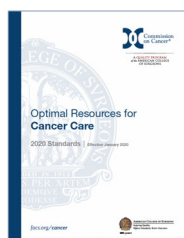
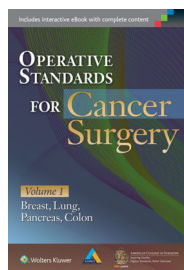
Goals

- Collaborate with the ACS Cancer Research Program to develop evidence-based standards for the technical conduct of oncologic surgery
- Create and disseminate tools that support implementation and adherence to standards, including synoptic operative report templates and electronic protocols for cancer surgery
- Educate surgeons on the technical conduct of oncologic surgery

Leadership

CSSP Chair: Matthew H.G. Katz, MD FACS
CSSP Vice-Chair: Kelly K. Hunt, MD, FACS
Senior Manager: Amanda B. Francescatti, MS

The CoC Operative Standards



| Standard | Disease Site | Procedure | Documentation |
|----------|--------------|-------------------------|-------------------------|
| 5.3 | Breast | Sentinel node biopsy | Operative report |
| 5.4 | Breast | Axillary dissection | Operative report |
| 5.5 | Melanoma | Wide local excision | Operative report |
| 5.6 | Colon | Colectomy (any) | Operative report |
| 5.7 | Rectum | Mid/low resection (TME) | Pathology report (CAP) |
| 5.8 | Lung | Lung resection (any) | Pathology report (CAP) |

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Standard 5.3 - Breast Sentinel Node Biopsy

Standard

All sentinel nodes for breast cancer must be identified, removed, and subjected to pathologic analysis to ensure that sentinel lymph node mapping and sentinel lymphadenectomy provide accurate information for breast cancer staging.

Measures of Compliance

1. All sentinel nodes for breast cancer are identified, removed, and subjected to pathologic analysis.
2. Operative reports for patients undergoing breast sentinel node biopsy includes required minimum elements in synoptic format.

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Standard 5.4 - Breast Axillary Dissection

Standard

Axillary dissection for breast cancer constitutes removing level I and II lymph nodes within an anatomic triangle comprised of the axillary vein, chest wall, and latissimus dorsi, while preserving key neurovascular structures.

Measures of Compliance

1. Axillary dissections for breast cancer remove level I and II lymph nodes within an anatomic triangle comprised of the axillary vein, chest wall, and latissimus dorsi, while preserving key neurovascular structures.
2. Operative reports for patients undergoing axillary dissection include the required minimum elements in synoptic format.

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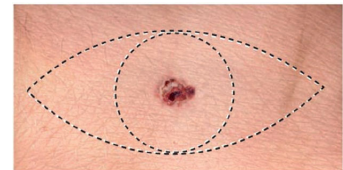
Standard 5.5 - Primary Cutaneous Melanoma

Standard

Margin width for melanoma wide local excision is based on the Breslow thickness of the primary tumor and is measured circumferentially at the level of the skin from either residual gross tumor and/or the previous biopsy scar.

Measures of Compliance

1. Clinical margin width for wide local excision of invasive melanoma is 1 cm for melanomas less than 1 mm thick.
2. Clinical margin width for wide local excision of invasive melanoma is 1 to 2 cm for melanomas 1 to 2 mm thick.
3. Clinical margin width for wide local excision of invasive melanoma is 2 cm for melanomas greater than 2 mm thick.
4. The clinical margin width for wide local excision of a melanoma in situ is at least 5 mm.
5. Operative reports for patients undergoing a wide local excision of a primary cutaneous melanoma include the required minimum elements in synoptic format



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Standard 5.6 - Colon Resection

Standard

Resection of the tumor-bearing bowel segment and complete lymphadenectomy is performed en bloc with proximal vascular ligation at the origin of the primary feeding vessel(s).

Measures of Compliance

1. Resection of the tumor-bearing bowel segment and complete lymphadenectomy is performed en bloc with proximal vascular ligation at the origin of the primary feeding vessel(s).
2. Operative reports for patients undergoing resection for colon cancer include the required minimum elements in synoptic format.

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Standard 5.7 - Total Mesorectal Excision

Standard

Total mesorectal excision (TME) is performed for all patients undergoing radical surgical resection of mid and low rectal cancers. Per College of American Pathologists (CAP) cancer protocol template for rectal cancer resections, the quality of TME resection (complete, near complete, or incomplete) must be documented in curative resection of rectal adenocarcinoma pathology reports in synoptic format.

Measures of Compliance

1. Total mesorectal excision is performed for all patients undergoing radical surgical resection of mid and low rectal cancers and results in a complete or near complete mesorectal excision.
2. The quality of TME resection (complete, near complete, or incomplete) is documented in curative resection of rectal adenocarcinoma pathology reports in synoptic format.

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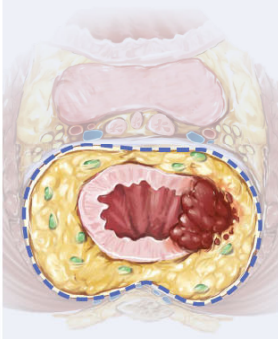
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Standard 5.7: Total Mesorectal Excision

| Operation | Maintain the 'Holy Plane' | Pathology Documentation | When? |
|--|---|---|---|
| <p>Total mesorectal excision (TME) is performed for mid and low rectal tumors, resulting in complete or near-complete TME</p> <p>Keep fascia propria of rectum intact, operate in plane between rectum and presacral fascia</p> <ul style="list-style-type: none">- Ensures negative margins- Protects neurovascular structures |  | <p>Quality of TME documented in synoptic report:</p> <div><input checked="" type="checkbox"/> Complete <input type="checkbox"/> Near-Complete <input type="checkbox"/> Incomplete</div> | <p>2021: Implementation</p> <p>2022 site visits: 70% Compliance</p> |

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Standard 5.8 - Pulmonary Resection


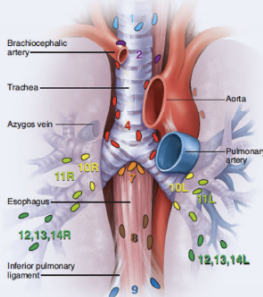
Standard

The surgical pathology report following any curative intent pulmonary resection for primary lung malignancy must contain lymph nodes from at least one (named and/or numbered) hilar station and at least three distinct (named and/or numbered) mediastinal stations.

Measures of Compliance

1. The surgical pathology report following any curative intent pulmonary resection for primary lung malignancy must contain lymph nodes from at least one (named and/or numbered) hilar station and at least three distinct (named and/or numbered) mediastinal stations.
2. The nodal stations examined by the pathologist must be documented in curative pulmonary resection pathology reports in synoptic format.

Standard 5.8: Pulmonary Resection


| Operation | Pathology Documentation | When? |
|--|---|--|
| <p>For any primary pulmonary resection performed with curative intent (including non-anatomic parenchymal-sparing resections)</p> <p>Resect nodal stations from:</p>  <p>Mediastinum (Stations 2-9) ≥3 distinct stations</p> <p>Hilum (Stations 10-14) ≥1 station</p> | <p>Synoptic report documents lymph nodes from:</p>  <p>≥ 1 hilar station ≥ 3 mediastinal stations</p> <p>with names and/or numbers of stations</p> <p><small>Figure adapted from Mountain CF, Dresler CM. Regional lymph node classification for lung cancer staging. <i>Chest</i> 1997;111:1718–1723.</small></p> | <p>2021: Implementation</p> <p>2022 site visits: 70% Compliance</p> |

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Clarifications for CoC Standards 5.7 and 5.8

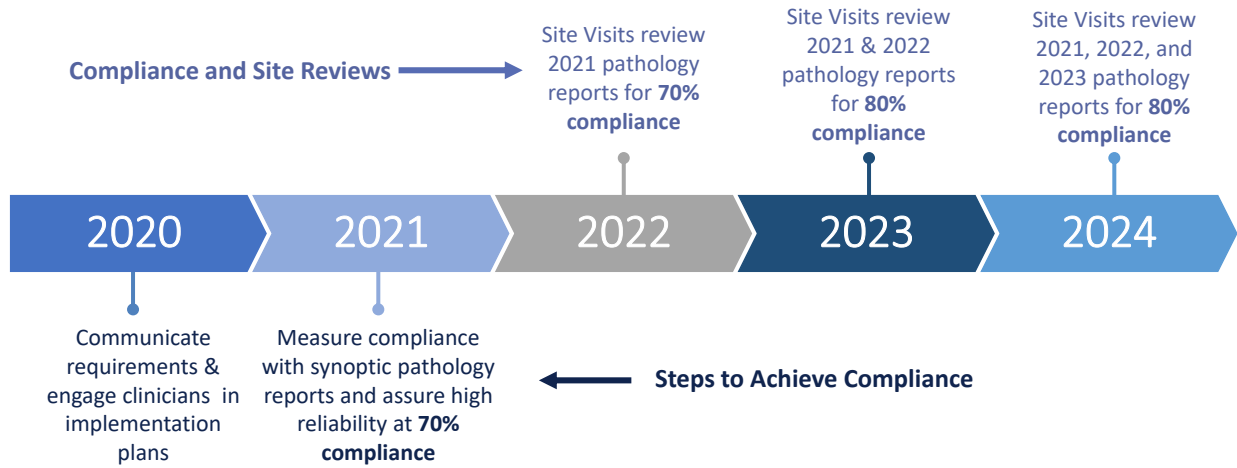
- The following clarifications were recently made for Standards 5.7 and 5.8:
 - To align with the College of American Pathologists cancer protocol template for rectal cancer resections, Standard 5.7 does not apply to primary resection specimens with no residual cancer (e.g., following neoadjuvant therapy).
 - Nodes taken from station 1 are not mediastinal and will not count toward Standard 5.8 requirements. The definition of mediastinal lymph node stations is 2–9.
 - Edits will be reflected in [Optimal Resources for Cancer Care \(2020 Standards\)](#) in early 2021



Mediastinum
(Stations 2-9)
≥3 distinct stations

Hilum
(Stations 10-14)
≥1 station

Standards 5.7 and 5.8 Requirements



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Standards 5.3 — 5.6 Requirements



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CoC Facility Compliance with Standards 5.3 — 5.6

- Compliance rates with the operative standards are estimated at 50-60% yet facilities need to be at 70% compliance by January 2023
- Preparedness survey of CoC sites
 - Results show many sites have had minimal to no communication/engagement with surgeons regarding CoC Operative Standards 5.3-5.6
 - Sites estimate it would take 6-12 months for surgeons to achieve routine use of synoptic operative reports
 - Survey results show promotion and educational content are crucial to the success of CoC sites with compliance to standards

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What is the CSSP doing to help CoC accredited programs?

- Communications
 - via ACS channels and social media to raise awareness of the CoC operative standards
 - Presenting updates at quarterly State Chair Town Halls and CLP meetings
 - Cancer Programs-sponsored educational workshops and webinars
- Creating videos and visual abstracts on compliance and technical components that can be shared at tumor boards
- Drafting resources for registrars, State Chairs and CLPs to distribute at CoC facilities
- Developing synoptic operative reporting templates for Standards 5.3-5.6
 - Working with major EHR vendors to integrate required data elements for synoptic operative reporting
- Submitting proposals for presentations at national meetings

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What Should CoC Accredited Programs Do Right Now?

- Contact EHR vendors
 - To confirm plans are underway to include synoptic operative reports/CoC elements for surgeons and to learn about the release timelines
- Ensure surgeons are aware of the operative standards
- Distribute communications and tools/resources developed by the CSSP to appropriate individuals
- Share information on upcoming workshops, webinars and surveys when available

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Recently Released Resources as of 1/7/21

- [CoC Operative Standards Introduction Video](#): 6-minute overview that can be shared during tumor board
- Featured episode on Society of Surgical Oncology podcast [SurgOnc Today](#): “American College of Surgeons Operative Standards for Cancer Surgery – Why we need them and how to put them into practice”
- [Recording](#) and [slides](#) from 12/7 multidisciplinary webinar on Standard 5.7
 - Coming soon: One-page summary with questions/answers from 12/7 webinar
- [Recording](#) and [slides](#) from 12/15 multidisciplinary webinar on Standard 5.8
 - Coming soon: One-page summary with questions/answers from 12/15 webinar
- Resources available on [CSSP Resources webpage](#)
- Updates and communications about CoC operative standards posted on [CoC 2020 Standards and Resources page](#)



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Resources and Events Coming Soon

- One-page visual abstracts for Standards 5.3-5.8
- Comprehensive FAQ document for Standards 5.3-5.8
- Multidisciplinary webinars on Standards 5.3-5.8
- SurgOnc Today Podcasts and Tweet Chats on Standards 5.7 and 5.8
- “Toolkit” of available resources, checklists
- Survey to assess surgeon knowledge/awareness of the operative standards
- Resources will be posted on [CSSP Resources webpage](#) and [CAnswer Forum](#), shared in Cancer Programs News and through Cancer Programs social media accounts (Facebook [@AmColSurgCancer](#) | Twitter [@AmColSurgCancer](#))



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Questions?

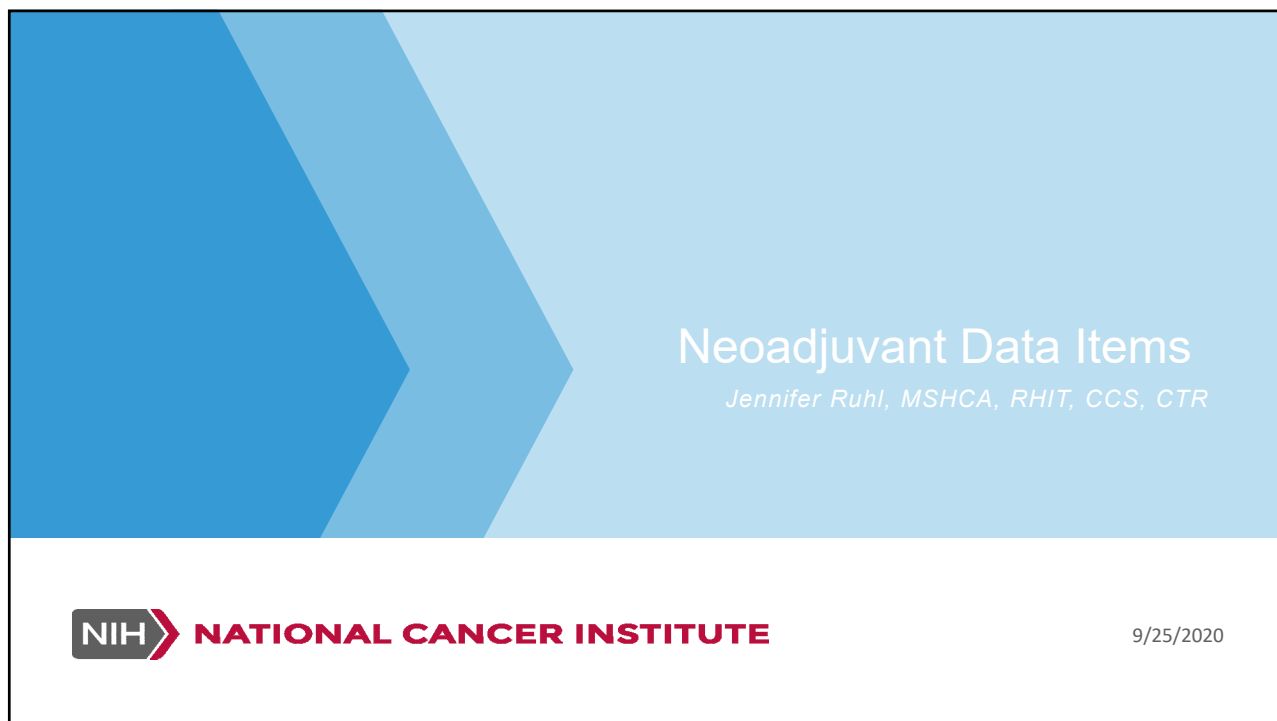
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Neoadjuvant Data Items

Jennifer Ruhl, MSHCA, RHIT, CCS, CTR

NIH NATIONAL CANCER INSTITUTE

9/25/2020

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- Many thanks to the following for helping with this presentation
 - Peggy Adamo (NCI SEER)
 - Carmela Groves (Westat)
 - Serban Negoita (NCI SEER)

Neoadjuvant Data Items

- Neoadjuvant Therapy (NAACCR #1632)
- Neoadjuvant Therapy -- Clinical Response (NAACCR #1633)
- Neoadjuvant Therapy -- Treatment Effect (NAACCR #1634)

- Applicable for **all** cases with diagnosis date of 1/1/2021+
 - Edits will prevent you from collecting these data items with diagnosis date prior to 1/1/2021
 - Note: The only other edits on these data items are for the allowable values

- For 2021, SEER is the only standard setter that is requiring these data items

Defining Neoadjuvant Therapy

- Also referred to as pre-surgical treatment or preoperative treatment
- Neoadjuvant Therapy administered to
 - Reduce disease burden
 - Eradicate or control undiscovered metastases
 - Improve outcomes of overall survival and disease-free survival

Defining Neoadjuvant Therapy

The new neoadjuvant data items are all based on the following definition of neoadjuvant therapy:

systemic treatment (chemotherapy, endocrine / hormone therapy, targeted therapy, immunotherapy, or biological therapy) and/or radiation therapy before intended or performed surgical resection to improve local therapy and long-term outcomes



Defining Neoadjuvant Therapy

- A full course of neoadjuvant therapy is generally 4-6 months long
- Treatment must follow the recommended guidelines for the type and duration of treatment for that primary site and/or histology
- The length of a full course of treatment may vary depending on the primary site and/or histology
 - For example, some sites only require 2-3 months of neoadjuvant therapy
 - Refer to NCCN guidelines for further information on what is a full course of neoadjuvant therapy
 - A physician's statement that a patient has completed neoadjuvant therapy must be used for this data item

Neoadjuvant Therapy (NAACCR Item #1632)

This data item records whether the patient had neoadjuvant therapy prior to planned definitive surgical resection of the primary site

| Code | Description |
|------|--|
| 0 | No neoadjuvant therapy, no treatment before surgery, surgical resection not part of first course of treatment plan Autopsy only |
| 1 | Neoadjuvant therapy completed according to treatment plan and guidelines |
| 2 | Neoadjuvant therapy started, but not completed OR unknown if completed |
| 3 | Limited systemic exposure when the intent was not neoadjuvant; treatment did not meet the definition of neoadjuvant therapy |
| 9 | Unknown if neoadjuvant therapy performed Death certificate only (DCO) |

Neoadjuvant Therapy (NAACCR Item #1632)

- **Code 0:** No neoadjuvant therapy, no treatment before surgery, surgical resection not part of first course of treatment plan, autopsy only
 - Surgical resection not part of planned first course of treatment
 - **Example 1:** Patient diagnosed; only chemotherapy and/or radiation planned
 - **Example 2:** Patient diagnosed; active surveillance only
 - **Example 3:** Patient diagnosed; no treatment planned, sent to hospice
 - **Example 4:** Patient diagnosed; treatment refused

Neoadjuvant Therapy (NAACCR Item #1632)

- **Code 0:** No neoadjuvant therapy, no treatment before surgery, surgical resection not part of first course of treatment plan, autopsy only
 - Patient did not have neoadjuvant therapy based on sequence of treatment
 - **Example 1:** Patient diagnosed; surgery done two weeks later
 - **Example 2:** Patient diagnosed; surgery done, followed by chemotherapy and/or radiation
 - **Example 3:** Patient diagnosed, surgery done, followed by hormone therapy

Neoadjuvant Therapy (NAACCR Item #1632)

- **Code 0:** Neoadjuvant therapy not part of standard treatment
 - Primary Sites: C420, C421, C423, C424, C809
 - Schemas:
 - 00830 HemeRetic
 - 99999 III-Defined Other
 - 00790: Lymphoma
 - 00795: Lymphoma (CLL/SLL)
 - 00811: Mycosis Fungoides
 - 00822: Plasma Cell Disorders
 - 00822: Plasma Cell Myeloma
 - 00812: Primary Cutaneous Lymphomas (excluding MF and SS)

Neoadjuvant Therapy (NAACCR Item #1632)

- **Code 1:** Neoadjuvant therapy completed according to treatment plan and guidelines
 - Defined as any tumor directed therapy meeting the definition of neoadjuvant treatment AND
 - Occurring prior to an intended or performed definitive surgical resection AND
 - Documented as neoadjuvant treatment by a treating physician OR part of patient's documented treatment regimen/protocol

- **Note:** As long as the planned first course of treatment **was neoadjuvant therapy followed by surgical resection**, it does **not** matter if the surgical resection was done for this data item

Neoadjuvant Therapy (NAACCR Item #1632)

- **Code 1:** Neoadjuvant therapy completed according to treatment plan and guidelines (for all examples, planned first course of treatment is neoadjuvant therapy followed by surgical resection)
 - **Example 1:** Patient completes neoadjuvant therapy, planned surgical resection performed
 - **Example 2:** Patient completes neoadjuvant therapy, complete response, planned surgical resection cancelled
 - **Example 3:** Patient completes neoadjuvant therapy, during post neoadjuvant clinical work up, found to have extensive metastasis, planned surgical resection cancelled

Neoadjuvant Therapy (NAACCR Item #1632)

- **Code 2:** Neoadjuvant therapy started, but not completed OR unknown if completed
 - Defined as any tumor directed therapy (excluding surgical resection) meeting the definition of neoadjuvant therapy AND
 - Whose intent was neoadjuvant therapy AND
 - Patient did not complete the full course of neoadjuvant therapy

Neoadjuvant Therapy (NAACCR Item #1632)

- **Code 2:** Neoadjuvant therapy started, but not completed OR unknown if completed
 - **Example 1:** Planned neoadjuvant therapy, 6 cycles of chemotherapy. After 4th cycle, patient's tumor growing and neoadjuvant therapy stopped, surgical resection cancelled (neoadjuvant therapy failed)
 - **Example 2:** Patient diagnosed. Planned neoadjuvant therapy. Patient completed 3 of 6 cycles and refused further treatment
 - **Example 3:** Planned neoadjuvant therapy. Patient completed 2 of 4 cycles and developed complications. Treatment stopped

Neoadjuvant Therapy (NAACCR Item #1632)

- **Code 3:** Limited systemic exposure when the intent was not neoadjuvant; treatment did not meet the definition of neoadjuvant therapy
 - Defined as any tumor directed therapy (excluding surgical resection) AND
 - Not documented as neoadjuvant in the treatment plan AND
 - Does not meet treatment guidelines for recommendations for neoadjuvant therapy

Neoadjuvant Therapy (NAACCR Item #1632)

- **Code 3:** Limited systemic exposure when the intent was not neoadjuvant; treatment did not meet the definition of neoadjuvant therapy
 - Patients receive some type of therapy prior to surgical resection, but not enough to qualify for a full course of neoadjuvant therapy
 - Limited exposure to systemic therapy:
 - May be given prior to surgery OR
 - Occur in clinical trials to study biology of cancer OR
 - Impacts the biology of a cancer
 - It is not a full course of neoadjuvant therapy with the intent to impact extent of surgical resection or other outcomes
 - Do not code this as neoadjuvant therapy (codes 1 or 2)

Neoadjuvant Therapy (NAACCR Item #1632)

- **Code 9:** Unknown if neoadjuvant therapy performed or DCO (Central registries only for DCO)
 - Neoadjuvant therapy planned, but unknown if given

- **Note:** Code 9 (unknown) should be rarely used
- **Reminder:** Use code 0 when it is clear that the patient did not have neoadjuvant therapy based on the sequence of diagnosis and treatment
 - You do not need a physician’s statement that no neoadjuvant therapy was administered
 - If patient did not have any treatment, code 0
 - Code 9 should be used mostly for when a patient had an initial plan of neoadjuvant therapy, but you don’t know if it was administered

Neoadjuvant Therapy-Clinical Response (NAACCR #1633)

This data item records the clinical outcomes of neoadjuvant therapy prior to planned surgical resection

| Code | Description |
|------|---|
| 0 | Neoadjuvant therapy not given |
| 1 | Complete clinical response (CR) (per managing/treating physician statement) |
| 2 | Partial clinical response (PR) (per managing/treating physician statement) |
| 3 | Progressive disease (PD) (per managing/treating physician statement) |
| 4 | Stable disease (SD) ((per managing/treating physician statement) |
| 5 | No response (NR) (per managing/treating physician statement) Not stated as progressive disease (PD) or stable disease (SD) |
| 6 | Neoadjuvant therapy done, managing/treating physician interpretation not available, treatment response inferred from imaging, biomarkers, or yc stage |
| 7 | Complete clinical response based on biopsy results from a pathology report (per pathologist assessment) |
| 8 | Neoadjuvant therapy done, response not documented or unknown |
| 9 | Unknown if neoadjuvant therapy performed Death certificate only (DCO) |

Neoadjuvant Therapy -- Clinical Response (NAACCR #1633)

- This data item records the clinical outcomes of neoadjuvant therapy prior to planned surgical resection

- **For codes 1-5, a statement from the managing/treating physician is required**
 - Evaluation is based on clinical work up, including imaging, biopsy, etc.

Neoadjuvant Therapy -- Clinical Response (NAACCR #1633)

- Code 0: Defined as patient not receiving neoadjuvant therapy
 - Neoadjuvant Therapy (NAACCR #1632) is coded to 0 or 3
 - 0: No neoadjuvant therapy given
 - 3: Limited systemic exposure when the intent was not neoadjuvant, treatment did not meet definition of neoadjuvant therapy

Neoadjuvant Therapy -- Clinical Response (NAACCR #1633)

- Code 1: Defined as complete (total) clinical response
 - Neoadjuvant Therapy (NAACCR #1632) is coded to 1 or 2
 - Complete response is defined as the disappearance of all known tumors/lesions and lymph nodes
- A statement from the managing/treating physician is required to code 1
 - Evaluation is based on clinical work up, including imaging, biopsy, etc.

Neoadjuvant Therapy -- Clinical Response (NAACCR #1633)

- Code 2 defined as partial response (PR)
 - Neoadjuvant Therapy (NAACCR #1632) is coded to 1 or 2
 - Partial response is defined as a decrease in the size/extent of the tumor and/or presence of lymph nodes or metastatic disease
 - Also defined as not being complete clinical response (CR) or progressive response (PD)
- A statement from the managing/treating physician is required to code 2
 - Evaluation is based on clinical work up, including imaging, biopsy, etc.

Neoadjuvant Therapy -- Clinical Response (NAACCR #1633)

- Code 3 defined as no response due to progressive disease (PD)
 - Neoadjuvant Therapy (NAACCR #1632) is coded to 1 or 2
 - PD is defined as an increase in the size/extent of the tumor and/or presence of lymph nodes and/or metastatic disease
 - Use this code when the physician
 - Documents no clinical response
 - States that there is no change in the size/extent of the tumor and/or the presence of lymph nodes or metastatic disease
- A statement from the managing/treating physician is required to code 3
 - Evaluation is based on clinical work up, including imaging, biopsy, etc.

Neoadjuvant Therapy -- Clinical Response (NAACCR #1633)

- Code 4 defined as no response due to stable disease (SD)
 - Neoadjuvant Therapy (NAACCR #1632) is coded to 1 or 2
 - SD is defined as no changes in the size/extent of the tumor and/or presence of lymph nodes or metastatic disease
 - Use this code when the physician
 - Documents no clinical response based on clinical findings due to stable disease
 - Or states that there is no change in the size/extent of the tumor and/or the presence of lymph nodes metastatic disease
- A statement from the managing/treating physician is required to code 4
 - Evaluation is based on clinical work up, including imaging, biopsy, etc.

Neoadjuvant Therapy -- Clinical Response (NAACCR #1633)

- Code 5 defined as no response (NR), NOS
 - Neoadjuvant Therapy (NAACCR #1632) is coded to 1 or 2
 - No response (NR), NOS is defined as no response without further indication of progression or that the tumor is stable
 - Use this code when the physician
 - Does not document that the tumor has progressed (code 3)
 - Does not document that there was a change in the tumor size/extent, or the tumor was stable (code 4)
- A statement from the managing/treating physician is required to code 5
 - Evaluation is based on clinical work up, including imaging, biopsy, etc.

Neoadjuvant Therapy -- Clinical Response (NAACCR #1633)

- Code 6 is defined as
 - Neoadjuvant Therapy completed
 - No statement from the managing/treating physician based on clinical evaluation
 - Clinical response is 'inferred' from imaging impressions, changes in biomarkers or 'yc' stage
 - Neoadjuvant Therapy (NAACCR #1632) is coded to 1

Neoadjuvant Therapy -- Clinical Response (NAACCR #1633)

- Code 7 is defined when a biopsy of the primary site and the pathology report state complete response and there is no statement regarding clinical response from the managing physician
 - Neoadjuvant Therapy (NAACCR #1632) is coded to 1

- Code 8 is when neoadjuvant therapy is completed, response not documented or unknown
 - Neoadjuvant Therapy (NAACCR #1632) is coded to 1

- Code 9 is when it is unknown whether neoadjuvant therapy was administered
 - Neoadjuvant Therapy (NAACCR #1632) is coded to 9

Neoadjuvant Therapy -- Treatment Effect (NAACCR #1634)

This data item records the pathologist's statement of neoadjuvant treatment effect on the primary tumor or site, with or without lymph nodes and/or distant metastasis from the surgical pathology report. Whenever treatment effect definitions are recommended by, or available in, the College of American Pathologists (CAP) Cancer Protocols, this data item follows the CAP definitions indicating absent or present effect. When site-specific CAP definitions are not available, use treatment effect codes for All Other Schemas in Appendix C. Site-specific codes are also included in Appendix C of this manual

| Code | Description |
|------|---|
| 0 | Neoadjuvant therapy not given |
| 1-4 | Site specific code; type of response |
| 6 | Neoadjuvant therapy completed and surgical resection performed, response not documented or unknown Cannot be determined |
| 7 | Neoadjuvant therapy completed and planned surgical resection not performed |
| 9 | Unknown if neoadjuvant therapy performed Unknown if planned surgical procedure performed after completion of neoadjuvant therapy Death certificate only (DCO) |

Neoadjuvant Therapy -- Treatment Effect (NAACCR #1634)

The screenshot shows a web browser window displaying the SEER manual page for 'Neoadjuvant Therapy -- Treatment Effect'. The page is titled 'Small Intestine' and 'Colon, Appendix, Rectosigmoid, Rectum'. It lists several PDF documents for download, including 'Coding Guidelines: Colon (PDF, 97 KB)', 'Coding Guidelines: Rectosigmoid, Rectum (PDF, 134 KB)', and 'Solid Tumor Rules: Colon, Rectosigmoid, and Rectum (PDF, 975 KB)'. Under the 'SURGERY CODES' section, there are links for 'Colon - (C180-C189) (PDF, 179 KB)', 'Rectosigmoid - (C199) (PDF, 161 KB)', and 'Rectum - (C209) (PDF, 178 KB)'. The 'SITE-SPECIFIC CODES FOR NEOADJUVANT THERAPY TREATMENT EFFECT' section includes 'Colon and Rectum, Esophagus, Stomach, Anus, Pancreas (PDF, 238 KB)' and 'Thymus, Heart and Mediastinum, Retroperitoneum, Soft Tissue Abdomen and Thoracic, Soft Tissue Head and Neck, Soft Tissue Other, Soft Tissue Trunk and Extremities, GIST (PDF, 206 KB) - Use these codes for sarcomas of the Colon, Appendix, Rectosigmoid, Rectum'. The page also shows 'EOD Schemas' at the bottom.

Neoadjuvant Therapy -- Treatment Effect (NAACCR #1634)

- This data item records the **pathologist's statement** of neoadjuvant treatment effect on the primary tumor or site, with or without lymph nodes and/or distant metastasis
- Note: This data item is **not** the same thing as AJCC's Post Therapy Path (yp) Pathological Response
 - AJCC's post therapy is based on the managing/treatment physician's evaluation from the surgical pathology report and clinical evaluation after the neoadjuvant therapy
- This data item is only looking at the results from the **surgical pathology report**

Neoadjuvant Therapy -- Treatment Effect (NAACCR #1634)

- Code 0 is defined as patient not receiving neoadjuvant therapy prior to surgical resection
- Pay attention to how you coded Neoadjuvant Therapy (NAACCR #1632). If that is coded to 0, then code this to 0. The coding guidelines are the same for both data items
- Cases coded to Neoadjuvant Therapy, code 3 (limited exposure) would also be coded to 0.

Neoadjuvant Therapy -- Treatment Effect (NAACCR #1634)

- Codes 1-4
 - These codes are site-specific
 - Some of the treatment effect code definitions are schema specific based on definitions from treatment effect sections in the CAP protocols
 - General Table
 - Remaining schemas are based on a General Definition
 - Have no definitions from the CAP protocols

Neoadjuvant Therapy -- Treatment Effect (NAACCR #1634)

- Specific Treatment Effect Tables include:
 - Colon and Rectum, Esophagus, Stomach, Anus, Pancreas
 - Thymus, Heart and Mediastinum, Retroperitoneum, Soft Tissue Abdomen and Thoracic, Soft Tissue Head and Neck, Soft Tissue Other, Soft Tissue Trunk and Extremities
 - Lung
 - Bone Appendicular, Bone Pelvis, Bone Spine
 - Breast
 - Ovary, Fallopian Tube, Primary Peritoneal Carcinoma
 - Prostate
- All Other Schemas (General Table)
 - Schemas not covered by site-specific codes

Neoadjuvant Therapy -- Treatment Effect (NAACCR #1634)

- Code 6: When neoadjuvant therapy was completed, and the response is not documented in the surgical pathology report or is unknown
- Use this code when the surgical pathology report is available, and there is no documented response in the surgical pathology report

Neoadjuvant Therapy -- Treatment Effect (NAACCR #1634)

- Code 7: Neoadjuvant therapy completed and planned surgical resection not performed
- There are several reasons why surgery may be cancelled
 - Patient completed neoadjuvant therapy and had a complete clinical response, surgical resection is cancelled
 - Patient completed neoadjuvant therapy, had progressive disease or presence of mets after neoadjuvant therapy, surgical resection was cancelled
 - Patient completed neoadjuvant therapy and patient refused surgical resection

Neoadjuvant Therapy -- Treatment Effect (NAACCR #1634)

- **All Other Schemas (General Table)**
 - Code 1: Complete pathological response
 - No viable cancer cells/no residual invasive carcinoma identified
 - Residual in situ carcinoma only
 - Code 2: Near complete pathological response
 - Single cells or rare small groups of invasive cancer cells
 - Code 3: Partial or minimal response
 - Residual invasive cancer cells present with evidence of tumor regression, more than single cells or rare small groups of cancer cell
 - Code 4: Poor or no pathological response
 - Extensive residual cancer with no evident tumor regression

Case Example 1

- Patient diagnosed with prostate cancer on 2/4/19. Started on Eligard (6-month injection) on 3/7/19. On June 12, patient confirms that he has chosen to have surgery. In October, cancer clinical confirms the surgery is for December. Patient receives another 6-month Eligard injection in October. Surgery delayed until March. Pathologists states that patient has undergone a year of androgen deprivation and the prostatectomy reveals areas of prostatic adenocarcinoma with neoadjuvant therapy related changes and stages using yp.
- Neoadjuvant Therapy – Code 3 (Limited systemic therapy)
 - Although patient had hormones for over a year, the Eligard was not intended to be neoadjuvant therapy (per AJCC, this would also not qualify for neoadjuvant therapy)
 - Neoadjuvant Therapy – Clinical Response- Code 0 (No neoadjuvant therapy)
 - Neoadjuvant Therapy – Treatment Effect – Code 0 (No neoadjuvant therapy)
 - Pathologist did stage this as yp; however, it does meet the qualifications for neoadjuvant therapy

Case Example 2

- Pt diagnosed with 3cm Lt breast nodule and core bx c/w High Grade DCIS w/apocrine features and Lt axillary LN core bx c/w mets invasive ductal ca. Pt had neoadjuvant treatment f/u w/Lt skin sparing mastectomy w/SLN bx with no residual ds on pathology report
- Neoadjuvant Therapy-Code 1 (Neoadjuvant therapy completed)
- Neoadjuvant Therapy-Clinical Response-Code 8 (no information on the response)
- Neoadjuvant Therapy-Treatment Effect – Code 1 (No residual invasive carcinoma present in breast)
 - As a reminder, we code the treatment effect based only on the pathology report, which stated no residual disease
 - Also noted, Breast has their own definitions for treatment effect for the primary tumor, and this fits the definition for code 1

Case Example 3

- Patient diagnosed with Lung Cancer, cT2b, cN2, cM0. Stage 3A. Planned neoadjuvant therapy followed by surgical resection. Neoadjuvant therapy completed. Prior to surgical resection, PET/CT scan shows slight decrease in RUL lung mass and response in mediastinal adenopathy. Patient presents for VATS w/RUL lobectomy. Surgery aborted to multiple pleural nodules identified. Pleura biopsies done and show mets Adenocarcinoma c/w lung primary

- Neoadjuvant Therapy-Code 1 (Neoadjuvant Therapy completed)
- Neoadjuvant Therapy-Clinical Response- Code 3 (Progressive disease)
 - Per the operative notes, pleural nodules identified, biopsied and confirmed to be mets
- Neoadjuvant Therapy-Treatment Effect Code 7 (Neoadjuvant therapy completed and planned surgical resection not performed)
 - Surgical resection started, but aborted due to the presence of mets

Case Example 4

- Patient with breast cancer. Patient completed their full course of neoadjuvant therapy. Noted to have a partial response, scheduled for surgery. Patient no show twice for schedule breast surg.

- Neoadjuvant Therapy-Code 1 (patient completed neoadjuvant therapy)
- Neoadjuvant Therapy-Clinical Response- Code 1 (Partial clinical response)
- Neoadjuvant Therapy-Treatment Effect- Code 7 (Neoadjuvant therapy completed and planned surgical resection not performed)
 - Based on the information that the patient was a no show for two appointments, assume that the planned surgical resection was not performed

Case Example 5

- Bladder cancer patient has neoadjuvant therapy. Per physician, noted to have significant response, cystectomy still recommended by physician. Patient declines cystectomy; however, does agree to have concurrent chemoradiation instead
- Neoadjuvant Therapy: Code 1 (neoadjuvant therapy administered)
 - Reminder: Initial plan was neoadjuvant therapy followed by cystectomy
- Neoadjuvant Therapy-Clinical Response: Code 2: Partial clinical response
 - Since physician still recommended the cystectomy, patient did not have a complete response. “Significant response” documented by the physician can be used to code “partial clinical response”
- Neoadjuvant Therapy-Treatment Effect: Code 7, Neoadjuvant therapy completed and planned surgical resection not performed
 - Patient refused the recommended surgery

Case Example 6

- Patient with pancreatic cancer that is resectable undergoes neoadjuvant chemo but only 1 cycle (3 treatments) is given due to intolerance. Pt then goes on to have surgery. Notes before surgery state some response to cycle of chemo. Pathologist stages yp, mentions response. Is this enough to be able to yp stage the case even though only 1 cycle was given?
- Neoadjuvant Therapy-Code 2 (Neoadjuvant therapy started, but not completed)
 - Patient did not complete the intended full course of neoadjuvant therapy, even though the pathologist stages this as yp and mentions response
- Neoadjuvant Therapy-Clinical Response- Code 0 (no neoadjuvant therapy)
 - Cannot code a response since patient did not complete neoadjuvant therapy
- Neoadjuvant Therapy-Treatment Effect- Code 0 (no neoadjuvant therapy)
 - Cannot code a response since patient did not complete neoadjuvant therapy


Example 7

- Patient with breast cancer. Due to COVID, surgical resection was delayed. Patient had short-term unconventional neoadjuvant endocrine therapy due to delayed surgery.

- Neoadjuvant Therapy: Code 0 (No neoadjuvant therapy)
 - The intention of the endocrine therapy was not neoadjuvant, but given to patient until the surgery could be done
- Neoadjuvant Therapy-Clinical Response: Code 0 (No neoadjuvant therapy)
- Neoadjuvant Therapy-Treatment Effect: Code 0 (No neoadjuvant therapy)

Moving Forward


- New Edits
 - Edits exist for schemas that are always 0
 - Edits planned based on relationships to other data items
- Questions
 - Determine what instructions need to be added or clarified based on questions received
 - Obtain more examples from questions
- Post some questions to SINQ so that registrars will have SINQ to refer to



For questions about coding the Neoadjuvant Therapy data items


Please post to Ask SEER Registrar
<https://seer.cancer.gov/registrars/contact.html>

Choose: SEER Manual

 NATIONAL CANCER INSTITUTE 45



Questions??

 NATIONAL CANCER INSTITUTE 46



TREATMENT CODING UPDATES

Jim Hofferkamp, CTR



INCISIONAL BIOPSY OF LYMPH NODE: CHANGES FOR 2021

- There are revised instructions related to Scope of Lymph Node Surgery code 1 (Biopsy or aspiration of regional lymph node, NOS).
- Do not count Scope of Lymph Node Surgery code 1 as surgery for the purpose of coding these data items.
- Date First Course Treatment [CoC]
- Treatment Status
- Date of First Surgical Procedure
- Radiation Sequence with Surgery
- Systemic Sequence with Surgery



Pre-2021 Scenario

Example 1
Needle Biopsy Regional LN +

1/03/2020 RUL biopsy+ adenocarcinoma done at outside facility

1/06/2020 Fine Needle Aspirate cytology of right hilar lymph node + metastatic adenocarcinoma done at my facility.

02/07/2020 Began Chemo & Radiation at my facility

Slide 1 of 2 for Example 1

| | |
|--|---|
| Date of diagnosis: | 01/03/2020 |
| Date of First Contact: | 02/07/2020 |
| Class of Case: | 22 Initial diagnosis elsewhere AND all first course treatment or a decision not to treat was done at the reporting facility |
| Scope of Regional Lymph Node Surgery: | 1 (Bx or Aspiration of Regional LN) |
| Date of First Course Treatment: | 01/06/2020 |

Case scenario from NAACCR Coding Pitfalls webinar 9/20

Pre-2021 Scenario

Example 1
Needle Biopsy Regional LN +

1/03/2020 RUL biopsy+ adenocarcinoma done at outside facility

1/06/2020 Fine Needle Aspirate cytology of right hilar lymph node + metastatic adenocarcinoma done at my facility.

02/07/2020 Began Chemo & Radiation at my facility

Slide 2 of 2 for Example 1

| | |
|--|---|
| Date of First Surgical Procedure: | 01/06/2020 (most software's auto-populate this field) |
| Date of Most Definitive Surgical Resection of the Primary Site: | BLANK (most software's auto-populate this field) |
| Regional Lymph Nodes Examined: | 95 No regional nodes were removed, but aspiration of regional nodes was performed |
| Regional Lymph Nodes Positive: | 95 No regional nodes were removed, but aspiration of regional nodes was performed |
| Date of Regional Lymph Node Surgery: | BLANK |
| AJCC Clinical N Suffix: | (f) |
| Systemic Surgery Sequence: | 3 Systemic therapy after surgery |
| Radiation Surgery Sequence: | 3 Radiation therapy after surgery |

2021+ Scenario

Example 1
Needle Biopsy Regional LN +

1/03/2021 RUL biopsy+ adenocarcinoma done at outside facility

1/06/2021 Fine Needle Aspirate cytology of right hilar lymph node + metastatic adenocarcinoma done at my facility.

02/07/2021 Began Chemo & Radiation at my facility

Slide 1 of 2 for Example 1

| | |
|--|---|
| Date of diagnosis: | 01/03/2021 |
| Date of First Contact: | 02/07/2021 |
| Class of Case: | 22 Initial diagnosis elsewhere AND all first course treatment or a decision not to treat was done at the reporting facility |
| Scope of Regional Lymph Node Surgery: | 1 (Bx or Aspiration of Regional LN) |
| Date of First Course Treatment: | 2/7/21 STORE 2021 |

Case scenario from NAACCR Coding Pitfalls webinar 9/20 5

2021+ Scenario

Example 1
Needle Biopsy Regional LN +

1/03/2020 RUL biopsy+ adenocarcinoma done at outside facility

1/06/2020 Fine Needle Aspirate cytology of right hilar lymph node + metastatic adenocarcinoma done at my facility.

02/07/2020 Began Chemo & Radiation at my facility

Slide 2 of 2 for Example 1

| | |
|--|---|
| Date of First Surgical Procedure: | BLANK (most software's auto-populate this field) |
| Date of Most Definitive Surgical Resection of the Primary Site: | BLANK (most software's auto-populate this field) |
| Regional Lymph Nodes Examined: | 95 No regional nodes were removed, but aspiration of regional nodes was performed |
| Regional Lymph Nodes Positive: | 95 No regional nodes were removed, but aspiration of regional nodes was performed |
| Date of Regional Lymph Node Surgery: | BLANK |
| AJCC Clinical N Suffix: | (f) STORE FNA or core needle biopsy only |
| Systemic Surgery Sequence: | 0 No systemic therapy and/or surgical procedure |
| Radiation Surgery Sequence: | 0 No radiation therapy and/or surgical procedure |

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MISC TREATMENT ISSUES-SEER

- Use the entire operative report as your primary source for determining the correct code to assign for surgery of primary site. Read the body of the operative report to determine exactly what was removed and what procedure was performed.” (SEER)
 - SINQ 20200058
- A researcher pointed out that CNS surgery codes 30, 40 and 55 have been used for spinal primaries even though the codes are specified as resection of tumor or lobe of **brain**.
 - SEER notified registries with cases coded to surg codes 30, 40, and 55 with primary site of spinal cord



MISC TREATMENT ISSUES-SEER

- SEER collects one surgery of primary site for each case: the most definitive, or the cumulative result of all surgeries performed on primary site during first course of treatment or prior to the cancer diagnosis. If your question is about recording more than one surgery of primary site for a case, please refer to the CoC CAnswer Forum.
- With the new SLN data items, we are getting some questions about where to record LNs removed when both SLN bx and regional node dissection are performed and how to count in # exam and # pos.
 - <https://seer.cancer.gov/tools/codingmanuals/2021manual.html>



MISC TREATMENT ISSUES-COC SLN BX FOR ENDOMETRIAL PRIMARIES

- 11-09-20, 05:32 AM
- If a patient with endometrial cancer has a TAH-BSO and sentinel lymph node biopsy: **Question - what is the correct code to enter for "Scope of Regional Lymph Node Surgery"**? (I believe it should be 2, but I can't find a direct answer in the above responses. If not 2, why?).
<http://cancerbulletin.facs.org/forums/forum/fords-national-cancer-data-base/store/sentinel-and-regional-nodes/107547-sln-bx-for-endometrial-primaries/page2>



MISC TREATMENT ISSUES-COC PALLIATIVE

- 10-27-20, 08:34 AM
- Patient had a Right maxillary mass and the biopsy showed Myeloid sarcoma. blood work shows no significant cytopenia, there was only mild leukocytosis, Per medical oncologist even though blood counts are unremarkable and patient is minimally symptomatic other than the mass, this is considered an advanced disease. At this point patient has a new diagnosis of AML per the oncologist.
Patient was offered low dose chemo due to age and frail status. Patient refused chemo and opted for end -of-life care /hospice.
- Would the Rx treatment status be coded to No tx given and would the palliative care be coded to 7?
<http://cancerbulletin.facs.org/forums/forum/fords-national-cancer-data-base/store/first-course-of-treatment-aa/palliative-aa/109644-palliative-care>



MISC TREATMENT ISSUES-COC HOSPICE

- When is Hospice Coded and When isn't it?
- 11-13-20, 12:08 PM
- I have seen some conflicting information in these threads and would like clarification please. When is hospice coded under palliative care and when isn't it?
- For example, I've seen the following as I've read through threads...
 - Patient diagnosed with glioblastoma who was unable to receive treatment and referred to hospice. Palliative treatment coded to 0.
 - Patient with stage IV lung cancer for whom chemotherapy was contraindicated and was referred to hospice. Code palliative care to 7 as it was unknown what care/treatment patient received at hospice.
- Does this make a difference? If so, might that have been the case for the glioblastoma patient...couldn't he have been placed on pain medication?
 - <http://cancerbulletin.facs.org/forums/forum/fords-national-cancer-data-base/store/first-course-of-treatment-aa/palliative-aa/110274-when-is-hospice-coded-and-when-isn-t-it>



MISC TREATMENT ISSUES-COC HOSPICE

- 11-03-20, 08:22 AM
- Good morning. We learned in a NAACCR webinar that we can code hospice care as palliative code 7. We are unsure how to code the locations of where the treatment took place. How would we code Rx hospital for the following?
 1. An inpatient at our hospital is diagnosed with stage IV breast cancer. She has significant comorbidities and chooses hospice care only. She is then transitioned into hospice care at a nearby facility. Would the location for the palliative care (rx hospital) be coded as our hospital? Or the hospice facility?
 2. If a patient chooses hospice care, and the hospice care is provided in her own home, how would the location for the hospice care (rx hospital) be coded?

Thank you.

 - <http://cancerbulletin.facs.org/forums/forum/fords-national-cancer-data-base/store/other-general-questions/109874-hos>

