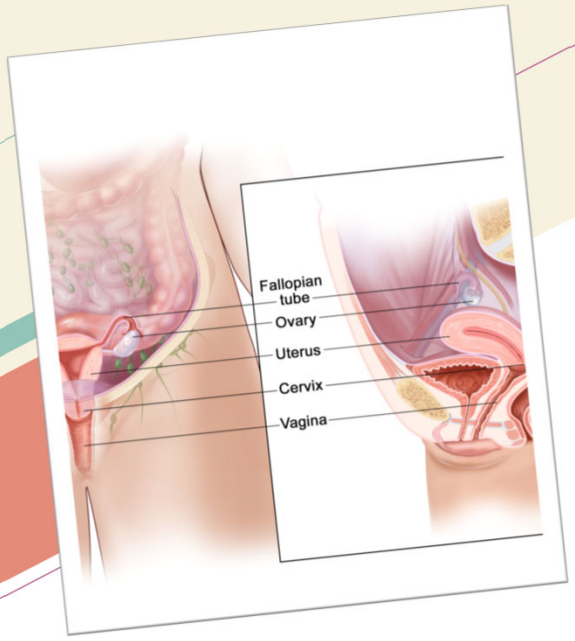

Uterus 2021

October 7, 2021

NAACCR 2021-2022 Webinar Series

Q&A

Please submit all questions, tips, or suggestions, 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.

2

Fabulous Prizes

NAACCR 3

Guest Presenter

- Wilson Apollo, CTR, Radiation Therapist

NAACCR 4

Agenda

- Changes for 2022
- Cervix Uteri
- Corpus Uteri
- Radiation

5

Changes for 2022

- New Histologies
- New SSDI
  - 3956: p16
  - 3959: LN Status: Femoral Inguinal
  - 3958: LN Status: Para-aortic
  - 3957: LN Status: Pelvic
- New Schema
  - Cervix Sarcoma

6

HPV Associated Histologies (C53.9)

- 8085/3 Squamous cell carcinoma, HPV-associated (C53._) [2022+]
- 8086/3 Squamous cell carcinoma, HPV-independent (C53._) [2022+]
- 8310/3 Adenocarcinoma, HPV-independent, clear cell type (C53._) [2022+]
- 8482/3 Adenocarcinoma, HPV-independent, gastric type (C53._) [2022+]
- 8483/2 Adenocarcinoma in situ, HPV-associated (C53._) [2022+; NOT REPORTABLE]
- 8483/3 Adenocarcinoma, HPV-associated (C53._) [2022+]
- 8484/2 Adenocarcinoma in situ, HPV-independent, NOS (C53._) [2022+; NOT REPORTABLE]
- 8484/3 Adenocarcinoma, HPV-independent, NOS (C53._) [2022+]

1. What histology is assigned to a patient diagnosed 1/1/2022 with p16 positive squamous cell carcinoma arising in the cervix?
   - 8070/3 Squamous cell carcinoma
   - 8085/3 Squamous cell carcinoma, HPV-associated (C53._)

What if the patient was diagnosed with the same histology in 2021?
- 8070/3 Squamous cell carcinoma
- 8085/3 Squamous cell carcinoma, HPV-associated (C53._)

7

New SSDIs

- 3956: p16
  - CoC
    - Registrars are being asked to complete this SSDI for all Cervix Schema cases starting with diagnosis date 1/1/2021
    - For cases diagnosed 2018-2020, leave this SSDI blank
    - **Manual review of Cervical cases diagnosed 2021 forward is required**
  - NPCR
    - Required for cases diagnosed 1/1/2022 and forward
    - May be blank for or may be completed for 2021 cases
    - For cases diagnosed 2018-2020, leave this SSDI blank
  - SEER
    - Required to collect p16 from CoC facilities for cases diagnosed 2021
    - Required to collect p16 from all reporting facilities for cases diagnosed 2022+

8

New SSDIs

- *3884: LN Status, Femoral-Inguinal, Para-aortic, Pelvic*
  - 3884 will no longer be collected for any year.
  - During the v22 conversion process the fields below will be populated for all 2018+ Cervix cases
    - **3959: LN Status: Femoral Inguinal**
      - Vulva
      - Vagina
    - **3958: LN Status: Para-aortic**
      - Vagina
      - Cervix
    - **3957: LN Status: Pelvic**
      - Vulva
      - Vagina
      - Cervix
- No manual review required

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9

New Schema

- Cervix Sarcoma Schema ID 00528
  - TNM based on Chapter 54.1 Corpus Uteri: Leiomyosarcoma and Endometrial Stromal Sarcoma
  - New EOD Schema
  - Cases will still be in the Summary Stage Cervix Chapter (no changes required for hospitals/registries that do Summary Stage only)
  - Grade and SSDIs: Same as the Corpus Sarcoma schema
  - Applies to all cases diagnosed 2021 forward
  - **Manual review required**

Histologies moving from Cervix Schema to Cervix Sarcoma are primarily adenosarcoma (8933/3), leiomyosarcoma (8890/3), endometrial stromal sarcoma (8930/3)

Carcinosarcoma/Malignant Mixed Mullerian Tumors (8980/3) will remain in the Cervix schema/Cervix AJCC chapter

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10

Manual Review

- Patient diagnosed in 2021 with adenosarcoma of the cervix.

	V21	V22
Primary Site	C53.9 Cervix, NOS	
Histology	8933/3 Adenosarcoma	
Schema ID	Cervix Uteri v9 (09520)	Cervix Sarcoma (00528)
AJCC ID	52 Cervix Uteri (9th)	54.1 Corpus Uteri Sarcoma (8th)
AJCC Stage	Chapter 52 Cervix Uteri	Chapter 54 Corpus Uteri Sarcoma -All T,N,M values will be reset to blank. Stage groups reset to 99.
Summary Stage 2018	Cervix	
EOD • Primary Tumor • Regional Nodes • Mets	Cervix 00520 • *300 Localized, NOS (L)*	Cervix Sarcoma 00528 • Values not reset. Will require manual review • *300 Extension of metastasis within true pelvis (RE)*
Grade	G1-3	FIGO Grade (Values not reset. Will require manual review)
SSDI's	Cervix SSDI's	All SSDI's will be set to blank. Will require manual review

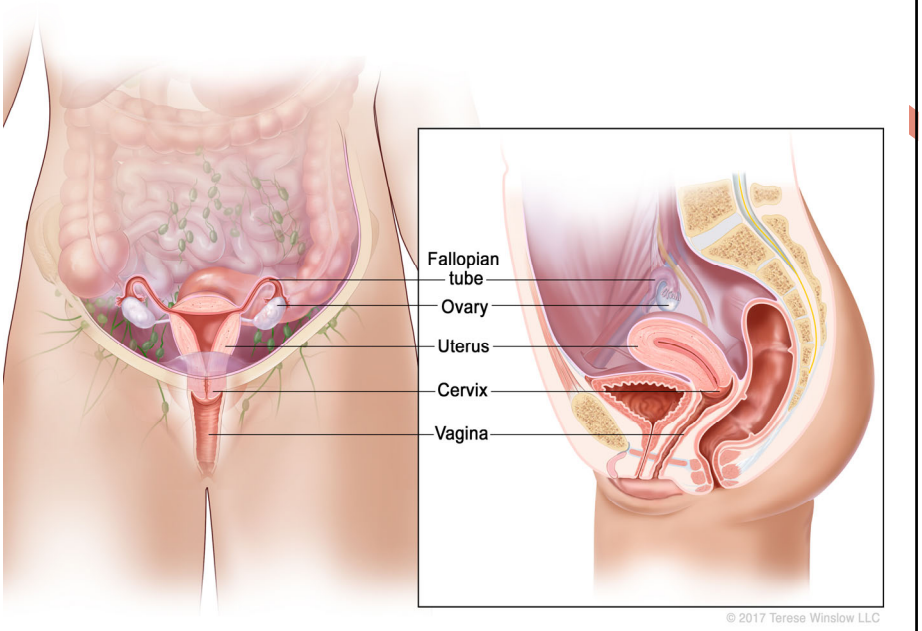
11

Cervix Uteri

12

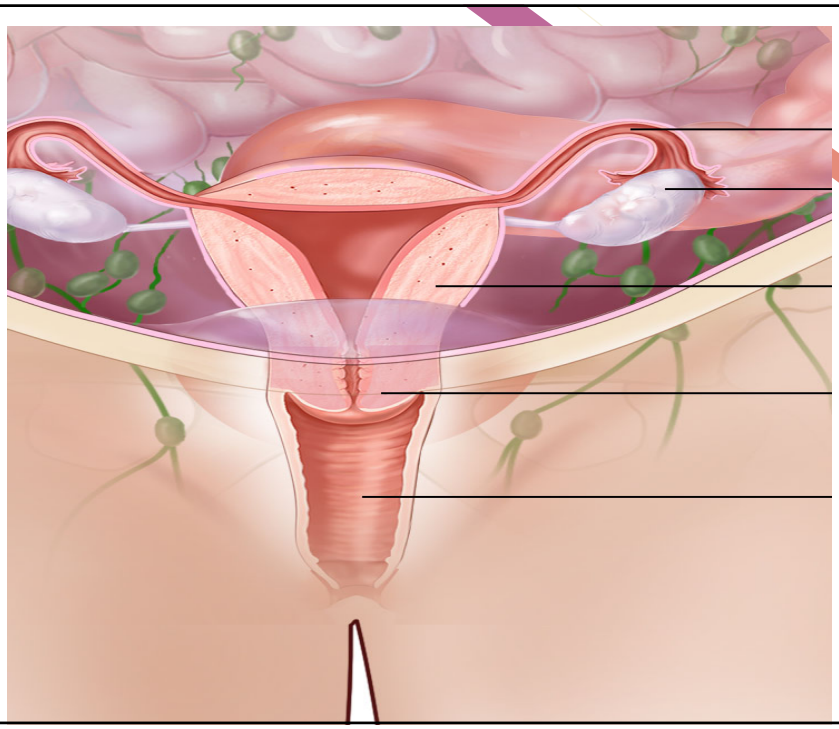
Anatomy

- Uterus
  - Cervix Uteri
  - Corpus Uteri



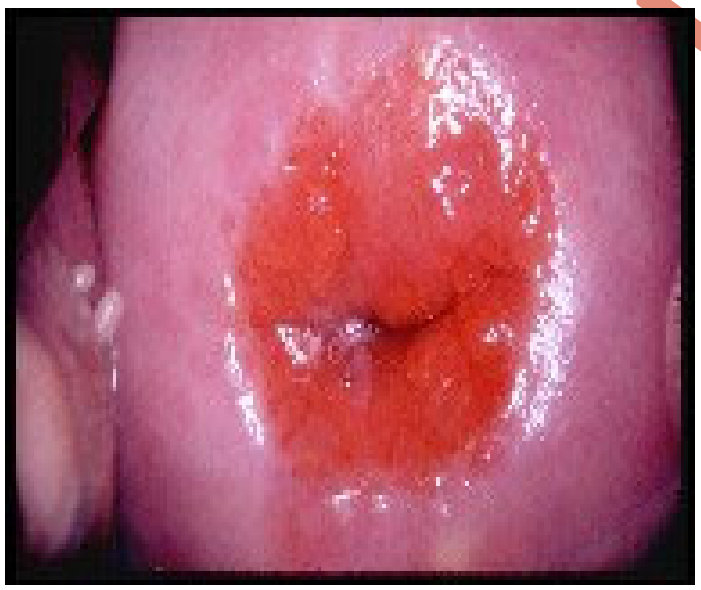
Anatomy

- Cervix Uteri
  - Ectocervix
  - External os
  - Endocervix
  - Internal os



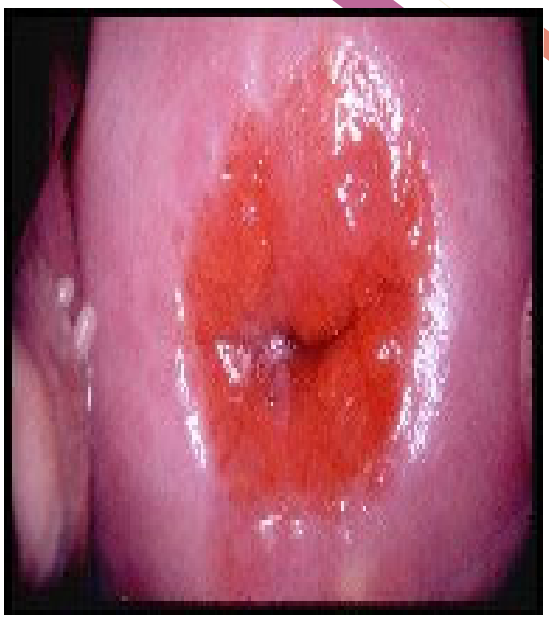
Cervical Ectropion

- The central (endocervical) columnar epithelium protrudes out through the external os of the cervix and onto the vaginal portion of the cervix
- Undergoes squamous metaplasia, and transforms to stratified squamous epithelium.



Histology-Cervix

- Columnar Epithelium
  - Adenocarcinoma
- Squamous Epithelium
  - Squamous cell carcinoma
- Squamo-columnar junction
  - Original
  - New



p16

- The p16 biomarker is overexpressed (produced) in response to HPV. It is therefore a surrogate marker for HPV disease.
- This data item must be based on testing results for p16 overexpression.
  - A statement of a patient being HPV positive or negative is not enough to code this data item
  - Testing for HPV by DNA, mRNA, antibody, or other methods should not be coded in this data item
  - Do not confuse p16 with HPV 16, which is a specific strain of virus

p16	Description
0	p16 Negative; Nonreactive
1	p16 Positive; Diffuse, Strong reactivity
8	Not applicable: Information not collected for this case (If this time is required by your standard setter, use of code 8 will result in an edit error)
9	Not tested for p16; Unknown
<BLANK>	N/A - Diagnosis year is prior to 2021

P16 Pop Quiz

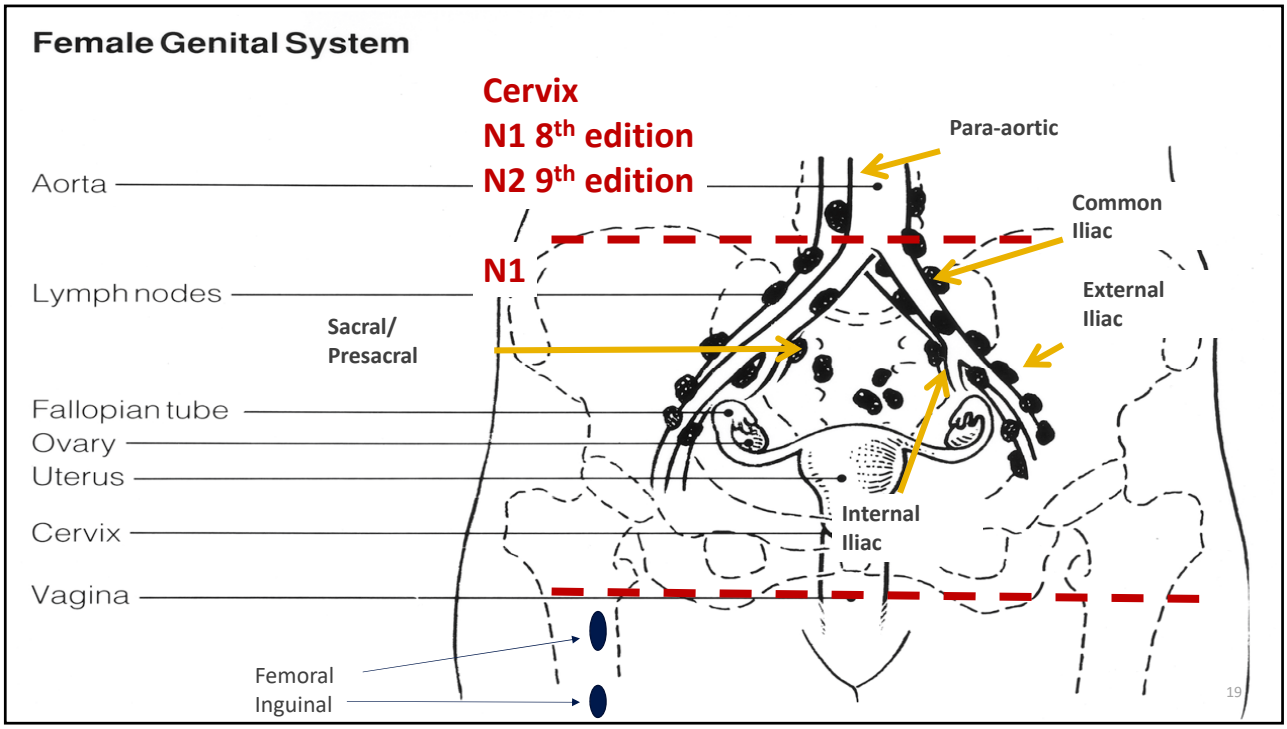
- 1/1/2022 Patient presents to your facility for radiation treatment of their HPV positive squamous cell carcinoma of the cervix.

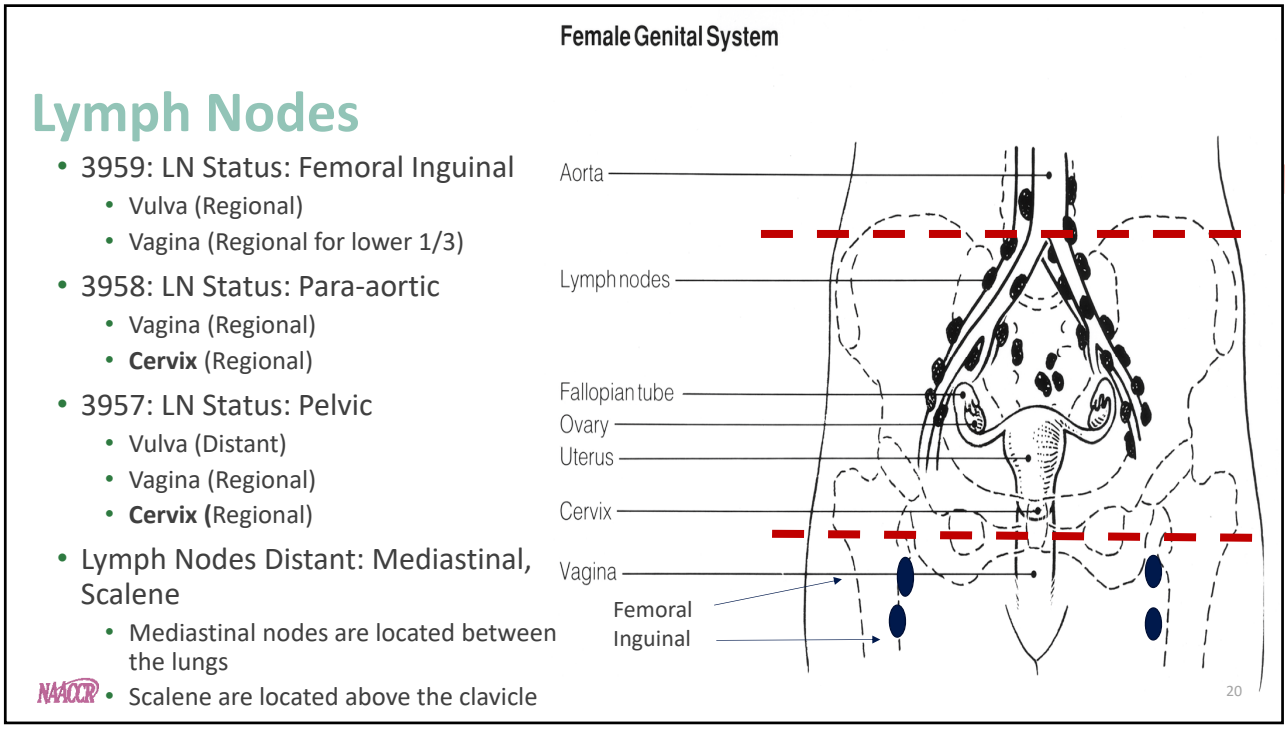
1 What histology would be assigned?
- 8070/3 Squamous cell carcinoma, NOS
- 8085/3 Squamous cell carcinoma, HPV-associated (C53._)

What code do we assign to the SSDI p16?
- 0 Negative
- 1 p16 positive
- 9 unknown
- Leave blank

p16	Description
0	p16 Negative; Nonreactive
1	p16 Positive; Diffuse, Strong reactivity
8	Not applicable: Information not collected for this case (If this time is required by your standard setter, use of code 8 will result in an edit error)
9	Not tested for p16; Unknown
<BLANK>	N/A - Diagnosis year is prior to 2021

18


Female Genital System
Cervix
N1 8th edition
N2 9th edition
N1
Aorta
Lymph nodes
Sacral/
Presacral
Fallopian tube
Ovary
Uterus
Cervix
Vagina
Femoral
Inguinal
Para-aortic
Common
Iliac
External
Iliac
Internal
Iliac
19


Female Genital System
Lymph Nodes
• 3959: LN Status: Femoral Inguinal
• Vulva (Regional)
• Vagina (Regional for lower 1/3)
• 3958: LN Status: Para-aortic
• Vagina (Regional)
• Cervix (Regional)
• 3957: LN Status: Pelvic
• Vulva (Distant)
• Vagina (Regional)
• Cervix (Regional)
• Lymph Nodes Distant: Mediastinal, Scalene
• Mediastinal nodes are located between the lungs
• Scalene are located above the clavicle
Aorta
Lymph nodes
Fallopian tube
Ovary
Uterus
Cervix
Vagina
Femoral
Inguinal
20

2018 FIGO Staging System for Cervical cancer

FIGO: Cervix (SSDI)

- The 2018 FIGO Staging System may be used to code the SSDI FIGO: Cervix for all cases diagnosed ~~2018~~ 2021 forward.

What I said during the webinar was incorrect!
T
he new FIGO staging system may only be used for cases Diagnosed 2021 forward.

The old FIGO system should be used to code this field for Cases diagnosed prior to 2021.

AJCC Cancer Staging System: Cervix Uteri (Version 9 of the AJCC Cancer Staging System)

- The Cervix Uteri chapter was updated to reflect changes in the FIGO Staging System in Version 9.
- Version 9 may be used for cases diagnosed 2021 forward
- Version 8 should be used for cases diagnosed 2018-2020.
- *Caution: Are your physicians assigning a stage based on version 9 for cases diagnosed 2018-2020?*

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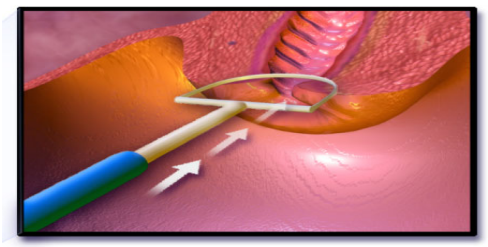
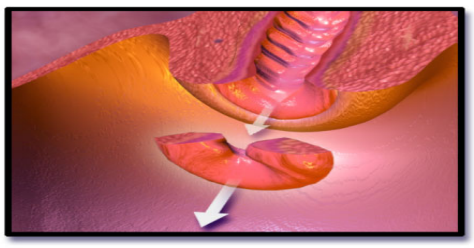
21

FIGO 2018

FIGO Stage I
FIGO Stage IA
FIGO Stage IA1
FIGO Stage IA2
FIGO Stage IB
FIGO Stage IB1
FIGO Stage IB2
FIGO Stage IB3





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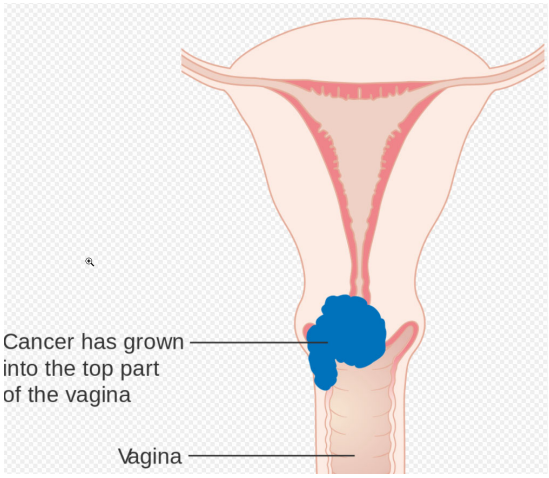
22

FIGO 2018

2	FIGO Stage II
2A	FIGO Stage IIA
2A1	FIGO Stage IIA1
2A2	FIGO Stage IIA2
2B	FIGO Stage IIB



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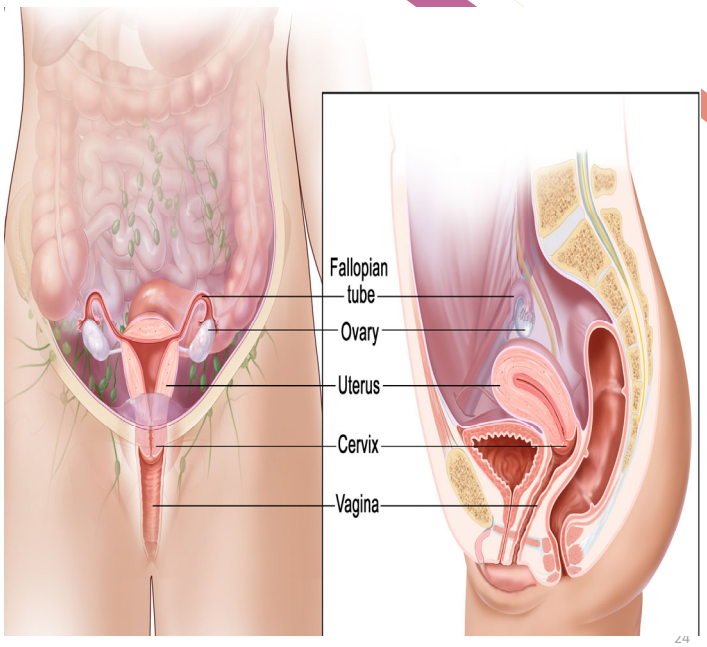
23

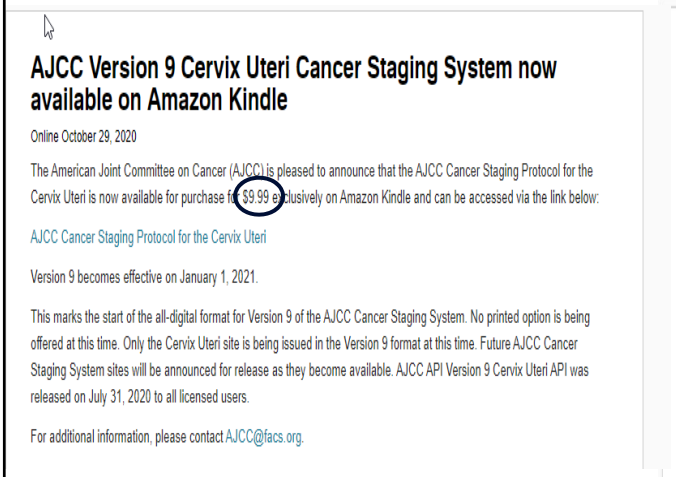
FIGO 2018

3	FIGO Stage III
3A	FIGO Stage IIIA
3B	FIGO Stage IIIB
3C	FIGO Stage IIIC
3C1	FIGO Stage IIIC1
3C2	FIGO Stage IIIC2
4	FIGO Stage IV
4A	FIGO Stage IVA
4B	FIGO Stage IVB



24

AJCC Version 9-Cervix Uteri



AJCC Version 9 Cervix Uteri Cancer Staging System now available on Amazon Kindle

Online October 29, 2020

The American Joint Committee on Cancer (AJCC) is pleased to announce that the AJCC Cancer Staging Protocol for the Cervix Uteri is now available for purchase for $9.99 exclusively on Amazon Kindle and can be accessed via the link below:

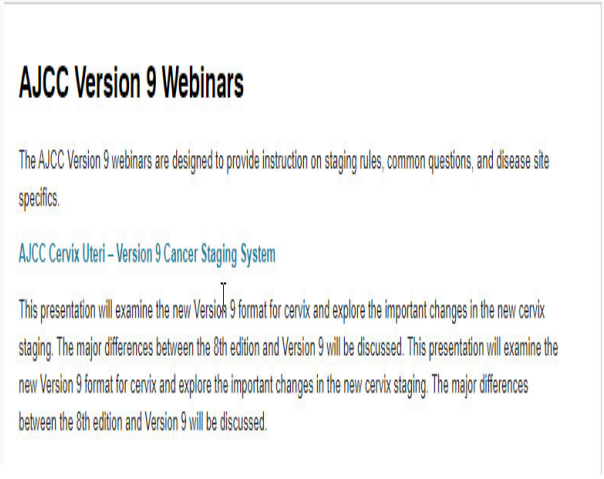
AJCC Cancer Staging Protocol for the Cervix Uteri

Version 9 becomes effective on January 1, 2021.

This marks the start of the all-digital format for Version 9 of the AJCC Cancer Staging System. No printed option is being offered at this time. Only the Cervix Uteri site is being issued in the Version 9 format at this time. Future AJCC Cancer Staging System sites will be announced for release as they become available. AJCC API Version 9 Cervix Uteri API was released on July 31, 2020 to all licensed users.

For additional information, please contact AJCC@facs.org.

https://www.facs.org/quality-programs/cancer/news/ajcc-kindle-102920



AJCC Version 9 Webinars

The AJCC Version 9 webinars are designed to provide instruction on staging rules, common questions, and disease site specifics.

AJCC Cervix Uteri – Version 9 Cancer Staging System

This presentation will examine the new Version 9 format for cervix and explore the important changes in the new cervix staging. The major differences between the 8th edition and Version 9 will be discussed. This presentation will examine the new Version 9 format for cervix and explore the important changes in the new cervix staging. The major differences between the 8th edition and Version 9 will be discussed.

https://www.facs.org/quality-programs/cancer/ajcc/staging-education/registrar/version-9

25

Changes to Version 9

Changes

- Imaging may be used to assign stage
  - Any type of imaging (previously could not be used when assigning stage)
- The definition of T1b and subgroups of T1b have changed
- Lymph node status is now part of stage grouping
- The N category has been modified

Highlights

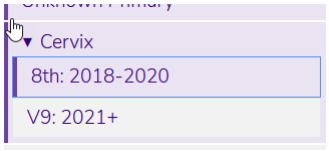
- Detailed information on the types of procedures used to gather information for clinical/pathologic stage
- Explanatory notes and rules for classification moved to the end of the chapter and expanded.
- Staging images included

26

EOD/Summary Stage

EOD

- Definitions similar to AJCC v8 for cases diagnosed 2018-2020
- Definitions similar to AJCC v9 for cases diagnosed 2021+



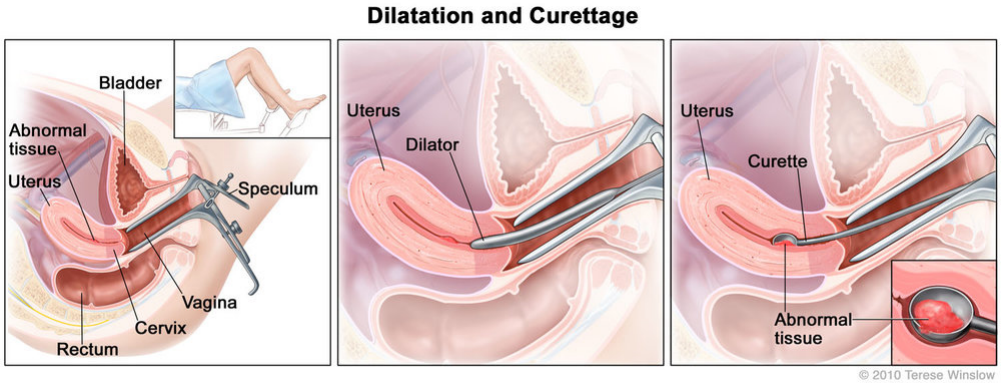
Summary Stage 2018

- Same definitions for cases diagnosed 2018+

27

Surgery - Cervix Uteri

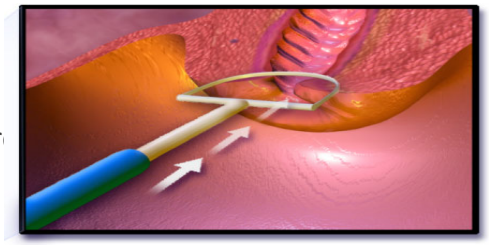
- Dilatation and Curettage (D&C)
  - For invasive cancers code as an incisional biopsy (02)
  - For In situ cancers code as surgery (25)

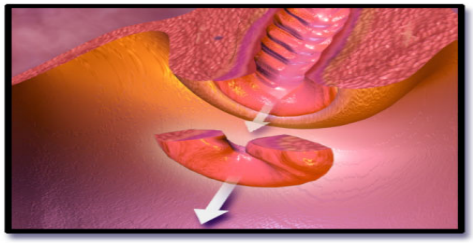


28

Surgery – Cervix Uteri

- LEEP (Loop Electrocautery Excision Procedur
  - Local tumor destruction (15)
    - No specimen sent to pathology
  - Local tumor excision (28)
    - Specimen sent to pathology
- Cone biopsy (27)
  - With gross excision of lesion (24)





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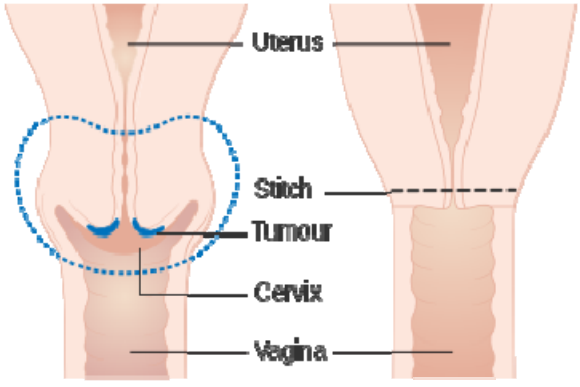
29

Surgery – Cervix Uteri

- Radical vaginal trachelectomy with laparoscopic lymphadenectomy procedure with or without SLN mapping
  - Fertility sparing option
  - Stage IA-2
  - Stage IB-1
    - Lesions of 2cm diameter or less

Code 29



Cancer Research UK / Wikimedia Commons

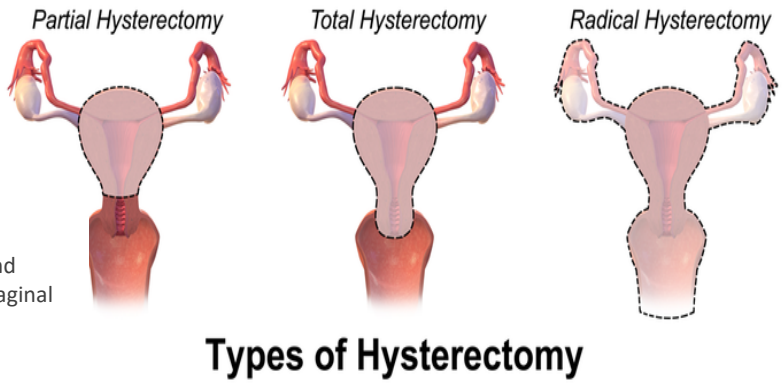
30

Surgery – Cervix Uteri

- Radical hysterectomy with bilateral pelvic lymph node dissection with or without SLN mapping
  - FIGO Stage IA-2, IB and IIA lesion
  - Fertility preservation is not

Total hysterectomy removes both the corpus and cervix uteri and may also include a portion of vaginal cuff.
- 30 without tube/ovaries
- 40 with tubes ovaries (TAH/BSO)

50-Radical hysterectomy includes the upper 1/3 to ½ of the vagina
54-Extended radical includes ¾ of the vagina



Types of Hysterectomy

31

Case 1

- 65 y/o female w/ h/o HTN, HLD, DMII, who presented w/ vaginal pruritus.
- 6/3/21: MRI abdomen= no evidence for metastatic disease. No pelvic lymphadenopathy.
- 6/4/21: PET/CT= No suspicious hypermetabolic activity in uterus, cervix & vagina. No FDG-avid lymphadenopathy. No PET/CT evidence of metastatic dz.
- 6/8/21: Cervix cone excision
  - Endocervical curettings= detached fragments of squamous epithelium w/ at least severe dysplasia (CIN 3).
  - Endometrial curettings= fragments of squamous mucosa w/ at least CIN3, w/ some fragments highly suspicious of invasive SCC.
  - Cervical bx= 1.2 cm invasive squamous cell carcinoma, moderately differentiated.
    - Depth of stromal invasion-8 mm/15 mm total cervical thickness.
    - Suspicious for LVI.
    - CIN3/carcinoma in situ (CIS) involving endocervical glands.
    - Endocervical margins+ for CIN3, negative for invasive carcinoma.

32

Case 1

- 6/8/21: Cervix cone excision
  - Endocervical curettings= detached fragments of squamous epithelium w/ at least severe dysplasia (CIN 3).
  - Endometrial curettings= fragments of squamous mucosa w/ at least CIN3, w/ some fragments highly suspicious of invasive SCC. 3
  - Cervical cone bx= 1.2 cm invasive squamous cell carcinoma, moderately differentiated.
    - Depth of stromal invasion-6 mm/16 mm total cervical thickness.
    - Suspicious for LVI.
    - CIN3/carcinoma in situ (CIS) involving endocervical glands.
    - Endocervical margins+ for CIN3, negative for invasive carcinoma.

Data Item	Value
Summary Stage	1-Localized
EOD Primary Tumor	250
cT	cT1b1
cN	cN0
cM	cM0
cStage	1B1
pT	
pN	
pM	
pStage	99

33

Case 2

- 61 y/o female who presented w/ bilat ovarian cyst on gyn visit. Pt otherwise asymptomatic.
  - PET/CT: FDG avid 20 mm RT iliac LN, suspicious for biologic tumor activity. 30 mm FDG avid RT vaginal cuff, suspicious for biologic tumor activity. No suspicious hypermetabolic osseous lesions.
- 1/12/21 D&C
  - 1. Endocervical curettings = fragments of detached cervical squamous mucosa, w/ high grade squamous intraepithelial lesion/CIN III.
  - 2. Cervical bx= endocervical tissue w/ invasive squamous cell carcinoma w/o keratinization.
- 1/14/21: Robotic-assisted TLH/BSO w/ pelvic LN dissection
  - 1.1 cm squamous cell carcinoma, keratinizing, of cervix. Histologic gr 2.
    - Stromal invasion+: depth of stromal invasion-8 mm/15 mm total cervical thickness.
    - No other tissue involvement.
    - Vaginal margins. Distance of invasive ca from margin= 2 cm.
    - LVI neg. Peritoneal washings neg
    - Regional LNs= 0/27 neg (parametrial, LT/RT pelvic, obturator)

What does TLH/BSO stand for?

34

Case 2

A question was sent to CAnswer forum asking if what was on imaging was enough to assign cN1

https://cancerbulletin.facs.org/forums/forum/ajcc-tnm-staging-version-9/education-developed-by-partner-organizations-aa/naaccr-webinars-and-edit-workgroup/121232-pet-ct-biologic-tumor-activity

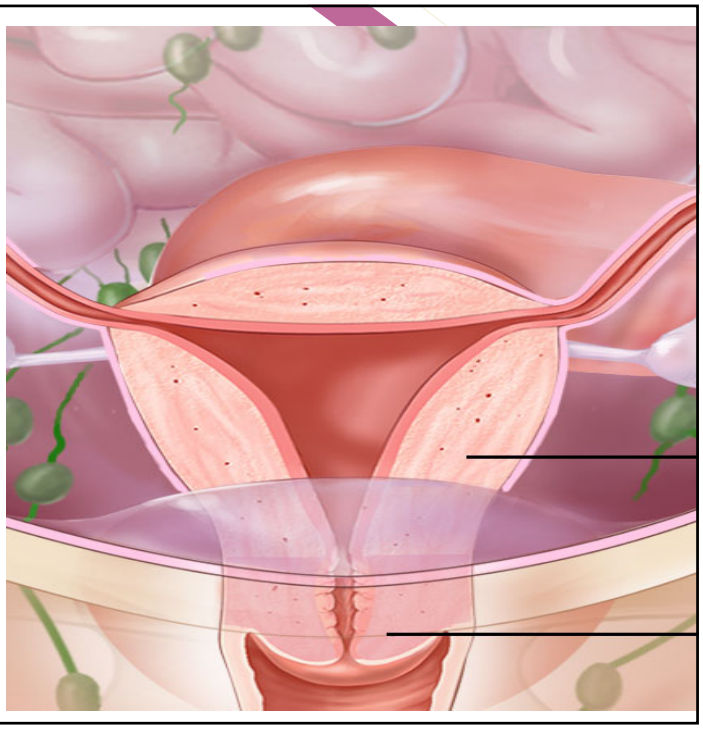
Data Item	Value
Summary Stage	1-Localized
EOD Primary Tumor	250
cT	
cN	*cN1?*
cM	cM0
cStage	99
pT	pT1b1
pN	pN0
pM	cM0
pStage	1b1
Diagnostic Staging Proc	02
Surgery of Primary Site	40

What would the stage group be if we had a single positive pelvic lymph node?

Corpus Uteri

Anatomy

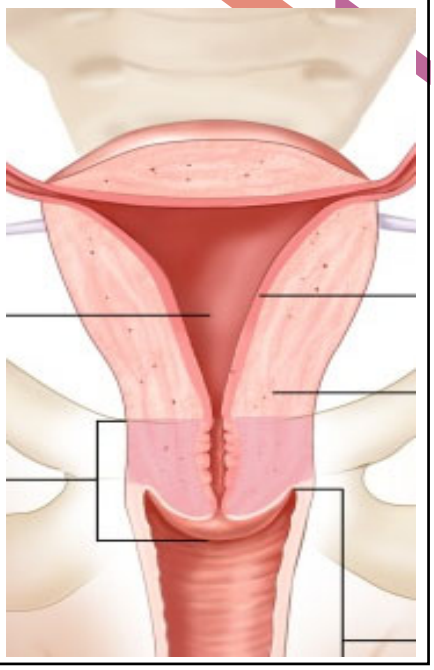
- Endometrium
  - Functional
  - Basal
- Myometrium
- Parametrium
  - The loose connective tissue around the uterus.
- Perimetrium
  - Peritoneum covering of the fundus and ventral and dorsal aspects of the uterus



Histology- endometrium

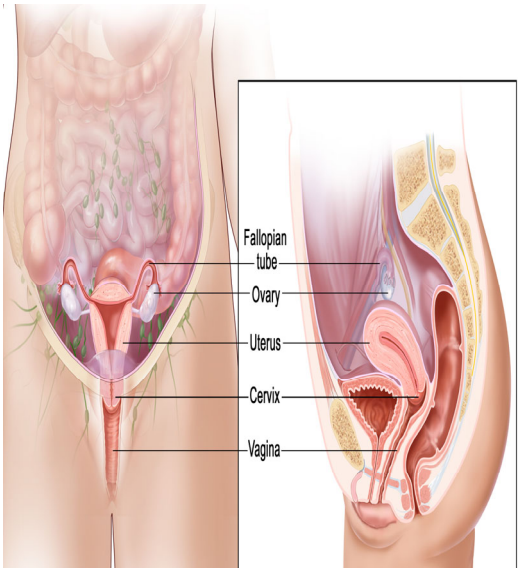
Adenocarcinoma of the endometrium

- Type 1
  - Endometrioid adenocarcinoma
  - Mucinous
- Type 2
  - Undifferentiated
  - Carcinosarcoma
  - Serous carcinoma
  - Clear cell carcinoma
  - Mucinous carcinoma



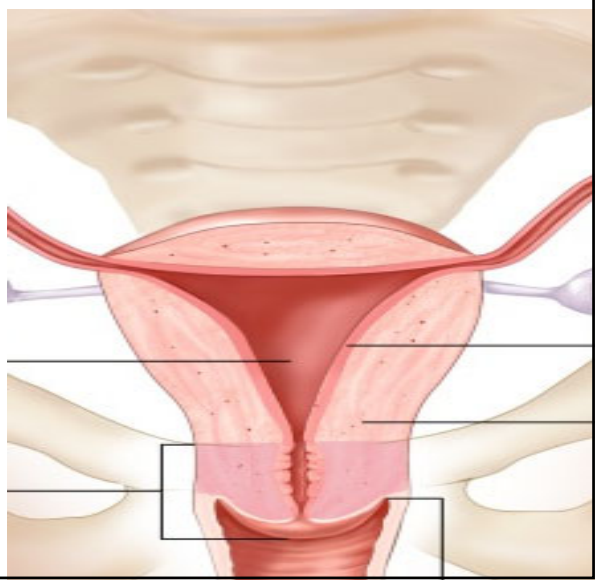
Summary Stage

- Corpus Uteri
  - Any invasive tumor confined to corpus uteri is localized
    - *Malignant cells in peritoneal cytology make the case regional even if tumor is confined to uterus.*
  - Extension to cervix is regional
  - Invasion of the bladder and rectum is regional unless tumor invades through the wall into the mucosa (distant)



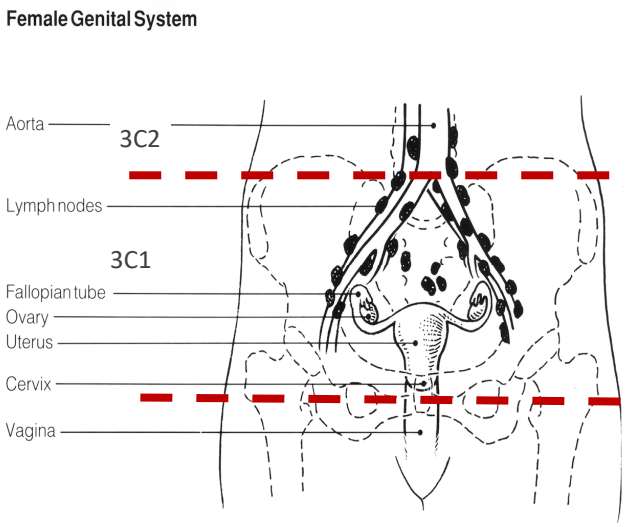
FIGO Stage Endometrium-Carcinoma

- The cancer is found only in the uterus or womb, and it has not spread to other parts of the body.
  - IA Tumor confined to the uterus, no or < ½ myometrial invasion
  - IB Tumor confined to the uterus, > ½ myometrial invasion
- II Cervical stromal invasion, but not beyond uterus



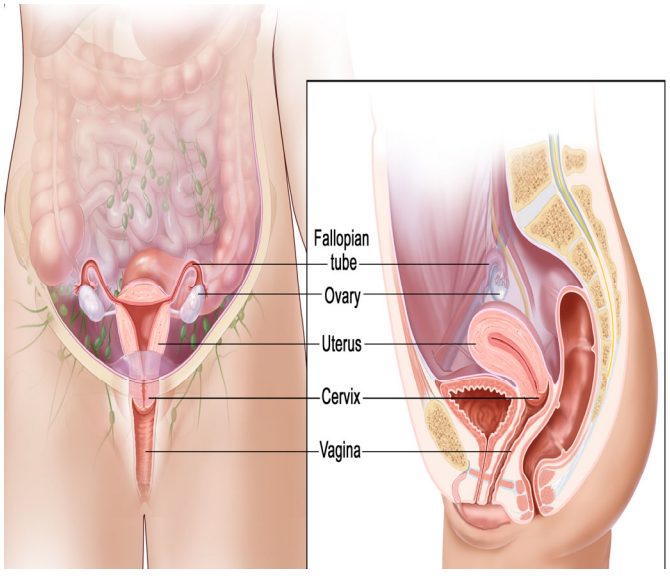
FIGO Stage Endometrium-Carcinoma

- III The cancer has spread beyond the uterus, but it is still only in the pelvic area.
  - IIIA Tumor invades serosa or adnexa
  - IIIB Vaginal and/or parametrial involvement
  - IIIC1 The cancer has spread to the regional pelvic lymph nodes.
  - IIIC2 The cancer has spread to the para-aortic lymph nodes with or without spread to the regional pelvic lymph nodes



FIGO Stage Endometrium-Carcinoma

- Stage IV: The cancer has metastasized to the rectum, bladder, and/or distant organs.
  - Stage IVA: The cancer has spread to the mucosa of the rectum or bladder.
  - Stage IVB: The cancer has spread to lymph nodes in the groin area, and/or it has spread to distant organs, such as the bones or lungs.



AJCC Rules for Classification

- Clinical Staging
  - Based on evidence acquired before initiation of treatment
- Pathologic Staging
  - FIGO uses surgical/pathologic staging
  - Based on information acquired before treatment supplemented by information acquired from pathologic assessment of resected tissues
  - Record depth of myometrial invasion with thickness of myometrium
  - *Assess regional lymph nodes surgically/pathologically*

NAACCR 43

Pop Quiz 3

- 67 y/o pt, G2P2, presented w/ postmenopausal bleeding w/positive findings on endometrial bx.
- Pelvic ultrasound: tumor measuring 4cm with 2cm invasion into the myometrium. Myometrium 2.7cm thickness
- Biopsy of endometrium: Endometrial adenocarcinoma, endometrioid type, FIGO grade 3
- Abdominal CT:
  - There is an ill defined and thickened appearance to the endometrium in keeping with history of endometrial neoplasm.
  - No adenopathy or distant metastasis.

Data Item	Values
Clinical T	cT1b
Clinical N	cN0
Clinical M	cM0
Stage	1b

NAACCR 44

Pop Quiz 3 cont.

- TAH/BSO with pelvic lymphadenectomy, and pelvic washings:
  - Pathology: 4.5 cm endometrioid adenocarcinoma with 89% myometrial invasion
  - FIGO grade 3
  - Involvement of uterine serosa
  - Upper endocervix positive inferior margins
  - LVI neg
  - Mismatch repair normal
  - Pelvic LNs = 0/11 neg

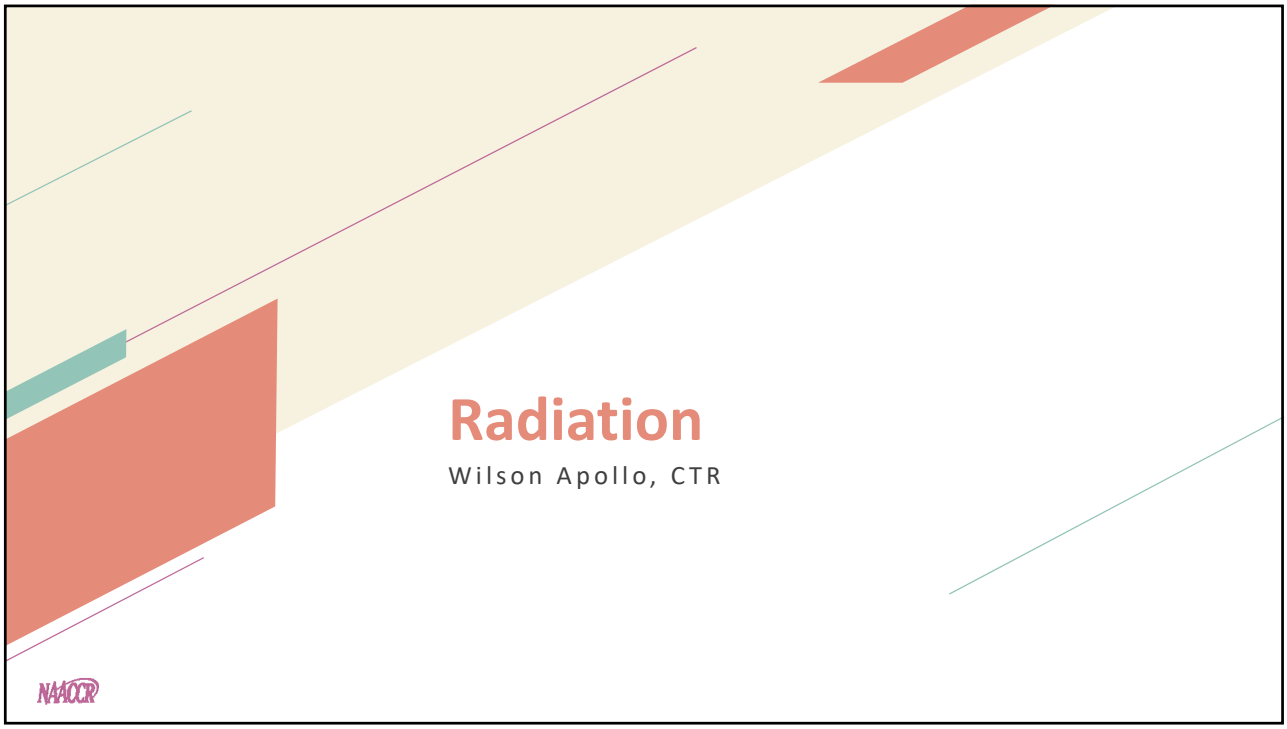
What if no lymph nodes removed?

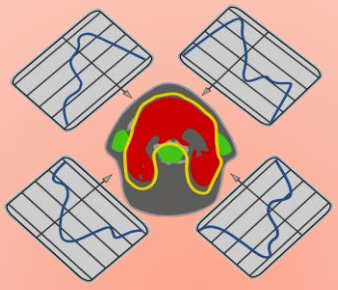
Data Item	Value
Clinical T	cT1b
Clinical N	cN0
Clinical M	cM0
Stage	1b
Path T	pT3a
Path N	cN0
Path M	cM0
Stage	3a

45

Questions?

46


Radiation
Wilson Apollo, CTR
NAACCR



Gyn Guidelines for Coding EBRT & Brachytherapy Treatments

Wilson Apollo, MS, CTR, RTT

WHA Consulting

NAACCR

October, 7, 2021

Vaginal Brachytherapy (VBT)

- Reduces vaginal recurrence to 0-3%! (in pts w/ high-risk factors)
- Pelvic(non-vaginal) recurrence down to 0-4.1%
- RTOG Recommendation:
  a. Combination of EBRT (45 Gy @ 1.8 Gy/fx) & VBT (3 fx): high locoregional control and low vaginal recurrences, 0-2.7%.
  b. Combination EBRT (50.4 Gy @ 1.8 Gy/fx) & VBT (2 fx).
  c. Pts w/ high risk histologies benefit from VBT and chemotherapy

M.M. Harkenrider et al. Brachytherapy 16 (2017) 95-108

HDR and LDR

- **HDR**: *High Dose Rate*, dose rate greater than 12 Gy/hr. Because of the high rate of dose delivery, this approach is used with temporary implants.
- **LDR**: *Low Dose Rate*, dose rate in the range of 0.4 to 2.0 Gy/hr. In this range we see permanent isotopes being implanted on pts. However, LDR sources can also be implanted temporarily.

Vaginal Brachytherapy (VBT)…

- HDR now used by ~96% of radiation oncologists for VBT,
- Advantages of HDR over LDR:
  a. Decreased radiation exposure to staff. Delivered via remote afterloader,
  b. Performed on outpatient basis,
  c. Reduced duration of pt immobilization, increase pt comfort, reduces risk of thromboembolism,
  d. Less expensive than LDR
- Some studies show similar results with HDR & LDR

M.M. Harkenrider et al. Brachytherapy 16 (2017) 95-108

Brachytherapy-definitions

Procedure	Definition
Brachytherapy	Radiation treatment given by placing radioactive material directly in or near the target, most often a tumor.
Interstitial	Radioactive material placed within the interstices or spaces within an organ.
Intracavitary	Radioactive material placed within a pre-existing body cavity.
Permanent	An implant that remains in place indefinitely and is not removed.
Temporary	Implants that are left within an organ or cavity for a specified period of time and are then removed after delivering the desired dose.
High-Dose-Rate	The delivery of temporary radioactive sources that utilize dose rates in excess of 0.2 Gy/min (12 Gy/hr).
Low Dose Rate	Brachytherapy in which the radioactive sources are left in place for the duration of treatment, usually utilizing doses at the rate of 40 to 200 cGy/hour. Note that low-dose-rate brachytherapy can be either temporary, and removed after several days, or permanent.

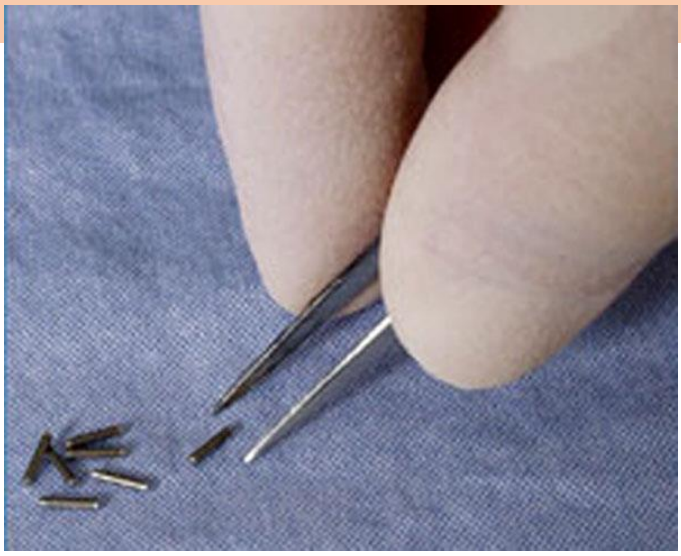
Brachytherapy for gyn cancers

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

Brachytherapy for gyn cancers…

- **Fletcher** intracavitary applicators used for **LDR brachy (^{137}C)**.
- Henschke applicator for intracavitary HDR brachy.
- Keep in mind that EBRT can also be prescribed as 1st course tx (40-45 Gy), in addition to brachytherapy. Code the brachytherapy as **boost if EBRT is also administered**.
- Remember to enter actual dose in cGy for Radiation, Boost Dose for brachytherapy tx, when given.
- Code brachy procedure based on whether it is intracavitary vs. interstitial, and LDR vs. HDR. (**08-11**)

Ir-192 brachytherapy seeds



Direction Modulated Brachytherapy (DMBT)

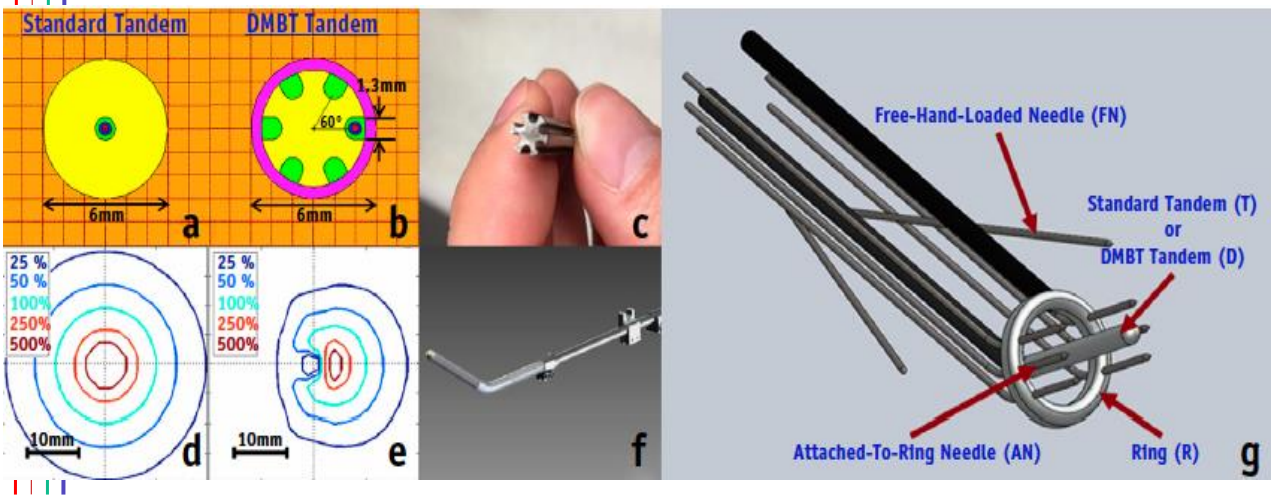
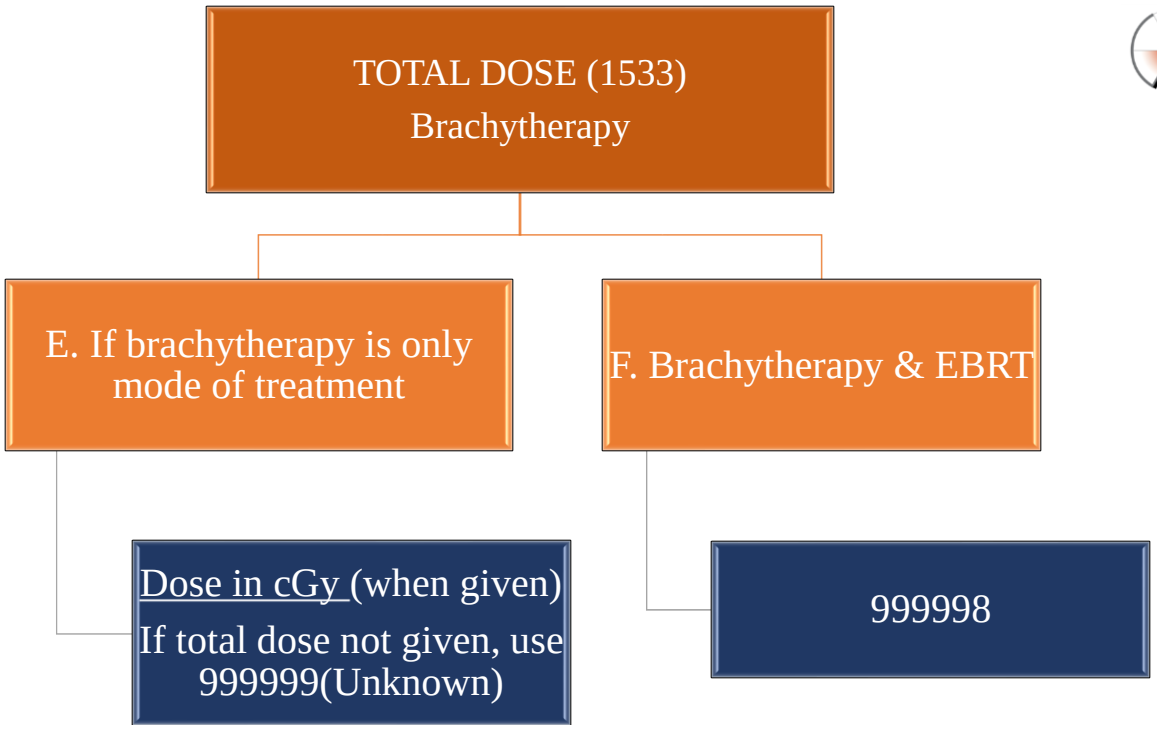


Image-Guided Adaptive Brachytherapy (IGABT)

- More sophisticated approach to planning dose delivery and volume contouring,
- Typically uses MRI imaging, 3D imaging,
- Decrease in dose to Organs at Risk (OARs),
- Improvement in target coverage,
- Improve local control,
- Improve survival.

Image-Guided Adaptive Brachytherapy (IGABT)-Coding

- Keep in mind that nowadays, IGABT can be delivered via interstitial or intracavitary,
- Source used is **Ir-192, HDR**
- Code selection will be either
  - 09: HDR, Intracavitary
  - 11: HDR, Interstitial



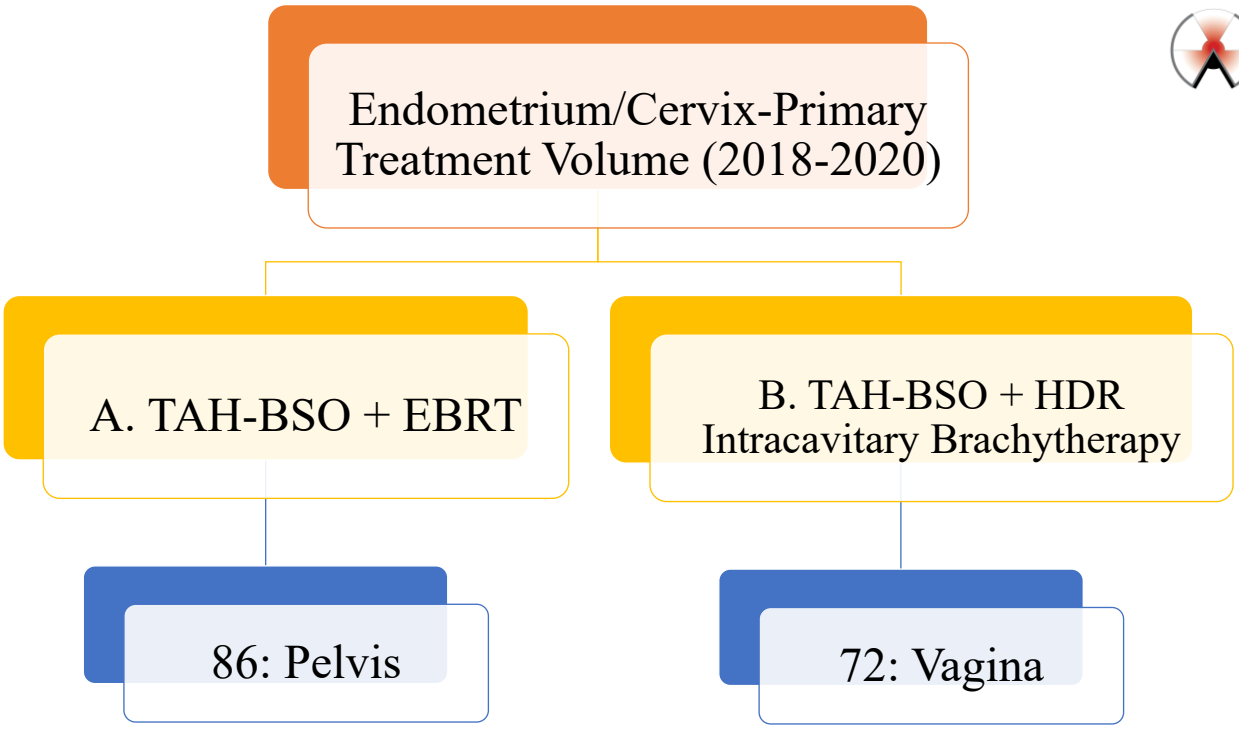
Total Dose F: Example 1

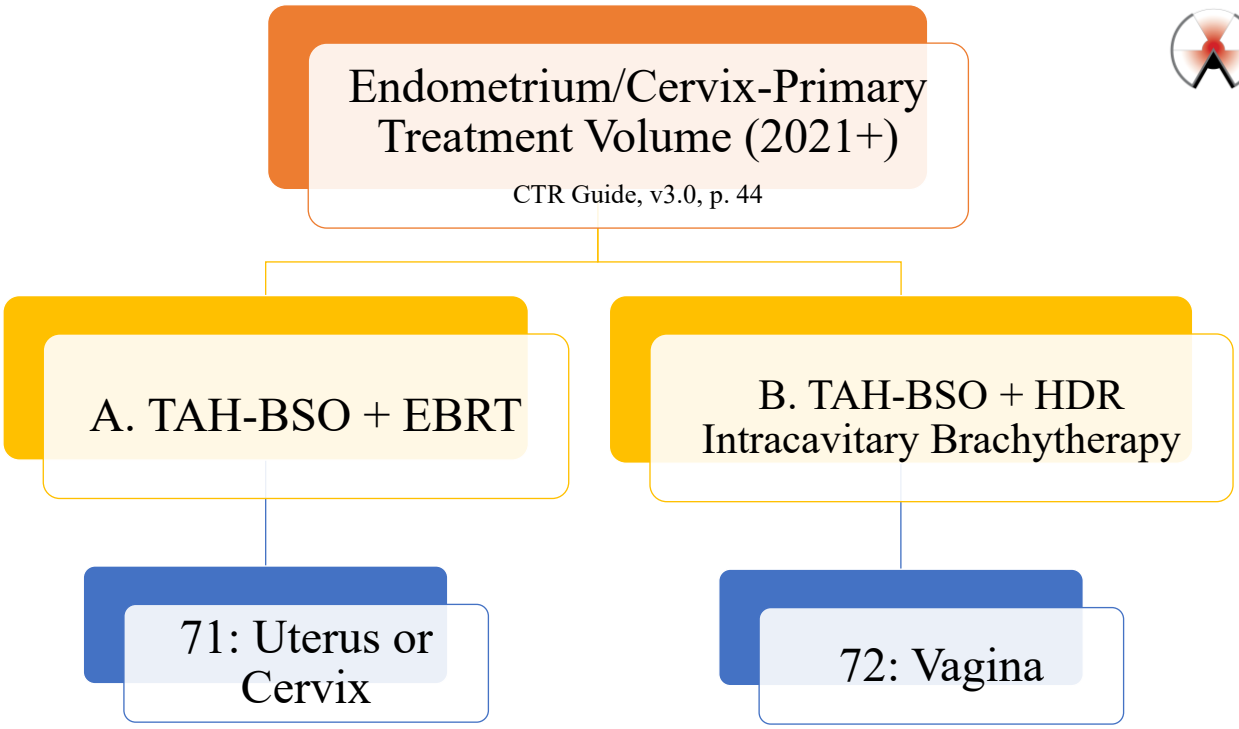
F: Brachytherapy + EBRT: Total dose = 999998.

Plan ID	Energy	Fx	Dose/fx (cGy)	Total Dose (cGy)	Start Date	End Date
Pelvis, Cervix	6MV/VMAT	25	180	4500	5/3/21	7/26/21
Cervix	Ir-192 HDR brachy	6	400	2400	7/11/21	7/26/21

Number of Phases of Rad Treatments	(02) 2 phases
RT Discontinued Early	(01) RT completes as prescribed
Total Dose	(999998)

Note: Total dose for Phase 2 (brachy) will be entered as 002400





RADIATION TREATMENT MODALITY CODES

- 00 = No Radiation Treatment
- 01 = External beam, NOS
- 02 = External beam, photons
- 03 = External beam, protons
- 04 = External beam, electrons
- 05 = External beam, neutrons
- 06 = External beam, carbon ions
- 07 = Brachytherapy, NOS
- 08 = Brachytherapy, intracavitary, LDR
- 09 = Brachytherapy, intracavitary, HDR
- 10 = Brachytherapy, Interstitial, LDR
- 11 = Brachytherapy, Interstitial, HDR
- 12 = Brachytherapy, electronic
- 13 = Radioisotopes, NOS
- 14 = Radioisotopes, Radium-232
- 15 = Radioisotopes, Strontium-89
- 16 = Radioisotopes, Strontium-90
- 99 = Treatment radiation modality unknown; Unknown if radiation treatment administered

CLINICAL SCENARIOS

Clinical case 1: Cervix

- 61 y/o female who presented w/ bilat ovarian cyst on gyn visit. Pt otherwise asymptomatic.
- PET/CT: FDG-avid 20 mm RT iliac LN, SUV max 9.9, suspicious for biologic tumor activity. 30 mm FDG-avid RT vaginal cuff, SUV max 21.8, suspicious for biologic tumor activity. No suspicious hypermetabolic osseous lesions.

1/12/21: 1. Endocervical curettings = fragments of detached cervical squamous mucosa, w/ high grade squamous intraepithelial lesion/CIN III. 2. Cervical bx= endocervical tissue w/ invasive squamous cell carcinoma w/o keratinization.

Clinical case 1: Cervix…

1/14/21: Robotic-assisted TLH/BSO w/ pelvic LN dissection= 1.1 cm squamous cell carcinoma, keratenizing, of cervix. Histologic gr 2. Stromal invasion+: depth of stromal invasion- 8 mm/15 mm total cervical thickness. No other tissue involvement. Vaginal margins-. Distance of invasive ca from margin= 2 cm.

Radial (circumferential) margin uninvolved.

Endocervical margin/lower uterine cervix margin uninvolved.

Parametria/paracervical tissue not involved. LVI neg. Peritoneal washings neg.

Regional LNs= 0/27 neg (parametrial, LT/RT pelvic LNs, obturator LNs.

Clinical case 1: Cervix…

6/9/21: Started cisplatin chemo

RT Completion Summary

- Pt treated using an IMRT technique while on concurrent chemo.

Txt Site	Energy	Dose/fx	#fx	Total Dose (cGy)	Start	End
Pelvis/vaginal cuff	6X	212	28/28	5,936	6/15/21	7/23/21

Case 1: Cervix

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	06/15/21
	5	Date Finished/Flag	07/23/21
	6	Number of Phases	01
	7	Discontinued Early	01 Completed
	8	Total Dose	**5936**
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	028
	14	Dose per Fraction	00212
	15	Total Phase 1 Dose	005936
Phase 2	16	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	Volume	
	24	Rad to Nodes	
	25	Modality	
	26	Planning Technique	
	27	Number of Fractions	
	28	Dose per Fraction	
	29	Total Phase 3 Dose	

Case 4 Rationale:

#8: Single phase of EBRT dose.
#9: If primary site in pelvic region is surgically removed, code to primary site.
#10: RT treatment summary clearly states that the pelvis was irradiated. This includes regional LNs.

Case 1 Notepad Text

615/21-7/23/21 @ XXX Hospital: Pelvis/vaginal cuff, 6X/IMRT, 2.12 Gy x 28 fx= 59.36 Gy.

Clinical Scenario 2: Endometrial cancer

CTR Guide, Case #16, page 26

- 67 y/o pt, G2P2, presented w/ postmenopausal bleeding w/ positive findings on endometrial bx. Pt underwent TAH/BSO with pelvic lymphadenectomy. Former smoker. –etoh. +fhx: M-grandfather dx'd w/ colon cancer.
- Pathology: 6.5 cm endometrioid adenocarcinoma with 89% Myometrial invasion, high histologic gr. Involvement of uterine serosa, upper endocervix with margins+ on inf endocervical. LVI-. Mismatch repair normal. Pelvic LNs = 0/11 neg. Pt underwent concurrent cisplatin/RT followed by carboplatin + paclitaxel.

24

Clinical Scenario 2: Endometrial cancer

- Radiation Therapy Treatment Summary:

Txt Site	Total Dose	Modality	Fx	Start date	End date
Whole pelvis	4500 cGy	6X/IMRT	25	4/7/21	5/11/21
Vaginal cuff	**1200 cGy**	Ir-192	2	5/13/21	5/18/21

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

25

26

ALERT!

- If dose/fraction and total dose is provided in Gy or cGy units *for any brachytherapy procedure*, capture this information in your abstract. Do not use codes 99998 or 999998 if this information is found in treatment summary!
- If brachytherapy is only mode of treatment and dose is not provided in cGy, code to 999999 for total dose.
- You **cannot**, however, add dose from EBRT phase to that of brachytherapy phase to get total dose!

Case 2: 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	04/07/21
	5	Date Finished/Flag	05/18/21
	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 2 Rationale:

#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 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**.
#21-22: If dose/fx & total dose is given in cGy, code it as such in the abstract.

Case 2 Notepad Text

4/7/21-5/18/21 @ XXX Hospital: 1. Whole pelvis, 6X/IMRT, 1.8 Gy x 25 fx= 45 Gy. 2. Vaginal cuff Ir-192 HDR intracavitary brachytherapy, 6 Gy x 2 fx= 12 Gy.

Clinical Case 3: Cervix

- 65 y/o female w/ h/o HTN, HLD, DMII, who presented w/ vaginal pruritus. Former smoker. Social etoh. +fhx: mother diagnosed w/ breast cancer @ 59.
- 6/3/21: MRI abdomen= no evidence for metastatic disease. No pelvic lymphadenopathy.
- 6/4/21: PET/CT= No suspicious hypermetabolic activity in uterus, cervix & vagina. No FDG-avid lymphadenopathy. No PET/CT evidence of metastatic dz.

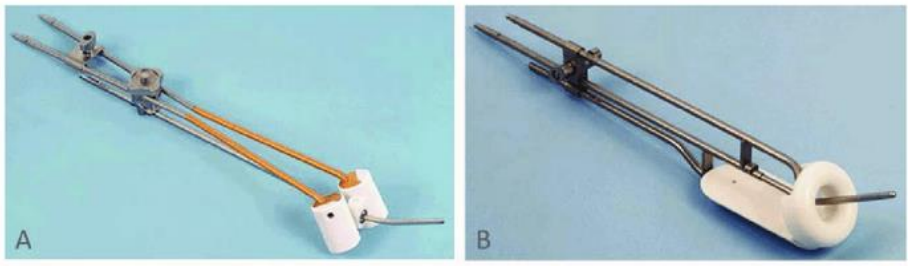
Clinical Case 3: Cervix…

- RT Treatment Summary

Txt Site	Energy	Dose/Fx (cGy)	#fx	Total Dose (cGy)	Start date	End date
Pelvis/Cervix	6MVX	180	25/25	4,500	8/2/21	9/9/21
Cervix T&R	Ir-192	700	4/4	2,800	8/30/21	9/18/21
Total Dose			29/29	7,300	8/2/21	9/18/21

- The patient was treated to the pelvis w/IMRT technique. Concurrent chemotherapy (Cisplatin) administered. HDR brachytherapy via Tandem and Ring was **interdigitated** with EBRT in the fourth week of treatment. The patient had the expected side effects of bowel and bladder irritation. At 4500cGy to the pelvis and 2800cGy to the cervix, the course of radiation therapy was completed without any complications.

A. Tandem & Ovoids
B. Tandem & Ring



Does not impact coding. Both are used for delivering HDR Ir-192 Intracavitary Brachytherapy, Code 09.

Clinical Case 3: Interdigitated HDR Brachytherapy

1. The standard of care for a patient with cervical cancer is EBRT followed by vaginal cuff HDR intracavitary brachytherapy. As this approach is *sequential in nature* (EBRT phase is completed before the brachytherapy phase is initiated), the overall treatment time (OTT) is extended.
2. In contrast, with interdigitated HDR brachytherapy, the HDR brachytherapy portion is actually incorporated into the *same (or overlap) treatment time frame as the EBRT*, thus reducing the overall treatment time (OTT), and possibly improving the patient's outcome. *This is not a sequential approach.*

Case 3: Cervix

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	08/02/21
	5	Date Finished/Flag	09/18/21
	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	04
	21	Dose per Fraction	00700
	22	Total Phase 2 Dose	002800
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 3 Rationale:

#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 primary site.
#10: RT treatment summary clearly states that the 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 surgery, primary treatment volume is **Vagina**.
#21-22: If dose/fx & total dose is given in cGy, code it as such in the abstract.

Case 3 Notepad text

- 8/2/21-9/18/21 @ XXX Hospital: 1. Pelvis/cervix, 6X/IMRT, 1.8 Gy x 25 fx = 45 Gy. 2. Cervix T&R, Ir-192 Intracavitary HDR brachytherapy, 7 Gy x 4 fx= 28 Gy.

Clinical Case 4: **Interdigitated** HDR Brachytherapy

56 y/o female w/ stage IIB cervical cancer, who opted for radiation therapy management.

Treatment Summary:

Plan ID	Dose/fx (cGy)	# fractions	Total dose (cGy)	Start	End
Cervix VMAT	200	25	5000	4/5/21	5/7/21
HDR vaginal cuff Ir-192 boost	800	3	2400	4/20/21	5/4/21

Notice that the *HDR boost was not delivered sequentially*!

Case 4- Cervix

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	1 All RT at this facility
	4	Date RT Started/Flag	04/05/2021
	5	Date RT Ended/Flag	05/07/2021
	6	Number of Phases of RT	02
	7	RT Discontinued Early	01 Radiation completed
	8	**Total Dose**	**999998**
Phase 1	9	Primary Treatment Volume	71 Uterus/cervix
	10	Rad to Draining LNs	00 No RT to draining lymph nodes
	11	Treatment Modality	02 Photons
	12	Planning Technique	05 IMRT
	13	Dose per Fraction	00200
	14	Number of Fractions	025
	15	Phase I Total Dose	05000
Phase 2	16	Primary Treatment Volume	72 Vagina
	17	Rad to Draining LNs	00 No RT to draining lymph nodes
	18	Treatment Modality	09 Brachytherapy, intracavitary, HDR
	19	Planning Technique	88 NA
	20	Dose per Fraction	00800
	21	Number of Fractions	003
	22	Phase II Total Dose	02400
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 4 Rationale:

- **#6:** This is still a <u>two-phase</u> treatment. Volume, fractionation and planning techniques are different.
- **#8:** As per the rules, we cannot add doses from different planning techniques.
- **#10:** No indication that LNs were included.
- **#12:** VMAT at minimum is IMRT.
- **#16:** Vaginal cuff brachy always coded to volume 72-vagina.

Case 4 Notepad Text

4/5/21-5/7/21 @ XXX Hosp: 1. Cervix, VMAT/IMRT, 2 Gy x 25 fx= 50 Gy. 2. Vaginal cuff boost, Ir-192 HDR intracavitary brachytherapy, 8 Gy x 3 fx= 24 Gy.

Clinical Case 5: Cervical ca

- How would I code this radiation treatment plan using the new data items? Does this qualify as three phases? In particular, how do I code the LT inguinal LN boost? Pt declined surgery & opted for EBRT

RT Treatment Summary:

Txt Site	Energy	Dose/Fx (cGy)	# of Fx	Total Dose (cGy)	Start date	End date
Pelvis, Cervix	6X/VMAT	180	25/25	4,500	5/30/21	7/26/21
LT Inguinal LN Boost	6X/3D	180	3/3	540		
Vaginal Cuff HDR brachy	Elekta Venezia	400	6	2,400	7/11/21	7/27/21

38

Clinical Case 5- Cervix RT

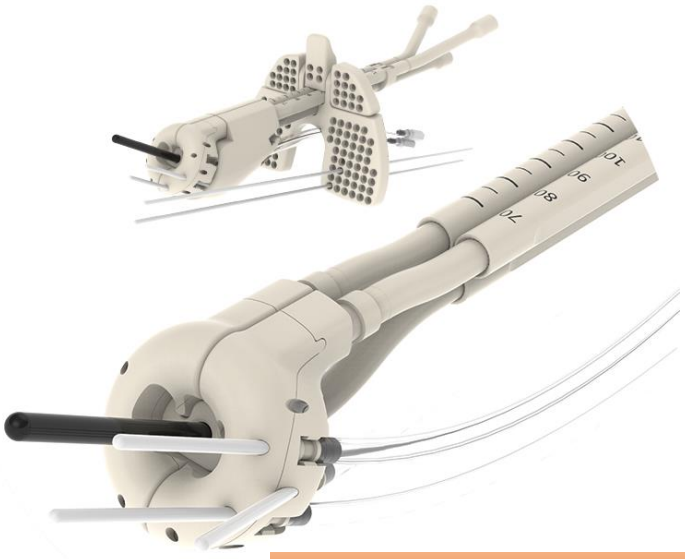
- Pelvis/cervix EBRT(Regional) delivered via **VMAT**.
- LT inguinal lymph node boost delivered via 3D-conformal plan.
- 7/11/21-7/27/21: **Elekta Venezia** brachytherapy applicator to cervix. 400 cGy x 6 fx= 2,400 cGy.

39

Clinical Case 5- Cervix RT

- 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*.
- Treatment summary specifically states "Vaginal Cuff Brachytherapy". This implies *intracavitary*.

40



Uses Ir-192 seeds, interstitial & Intracavitary!

Case 5: Cervical Cancer

Seg	#	Field	Code/Definition
Summary	1	Rad/Surg Sequence	0 No RT and/or surgical procedures
	2	Reason No Rad	0 Radiation was administered
	3	Location of Rad	1 All RT at this facility
	4	Date Started/Flag	5/30/21
	5	Date Finished/Flag	07/27/21
	6	Number of Phases	03
	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 (Inguinal LNs)	06 Pelvic lymph nodes
	17	Rad to Nodes	88 NA
	18	Modality	02: External beam, photons
	19	Planning Technique	04 Conformal or 3D
	20	Number of Fractions	003
	21	Dose per Fraction	00180
	22	Total Phase 2 Dose	000540
Phase 3	23	Volume	72 Vagina
	24	Rad to Nodes	00: No RT to draining LNs
	25	Modality	09 Brachytherapy, Intracavitary HDR
	26	Planning Technique	88 NA, txt not by external beam
	27	Number of Fractions	006
	28	Dose per Fraction	**00600**
	29	Total Phase 3 Dose	**002400**

Case 5 Rationale:

#8: You cannot add dose from brachytherapy procedure with EBRT dose.
#9: Primary site. Phase in chronological order
#10: RT treatment summary clearly states that the pelvis was irradiated. This includes regional LNs.
#16: Primary target is lymphatic region.
#23: Code to primary site, even if surgically removed.
#24: Vaginal cuff brachytherapy does not target lymphatics!
#25: Elekta Venezia hybrid system can deliver intracavitary and interstitial HDR brachytherapy via Ir-192 seeds. Vaginal cuff implies intracavitary.

Clinical Case 6- Cervix

EBRT Treatment Summary:

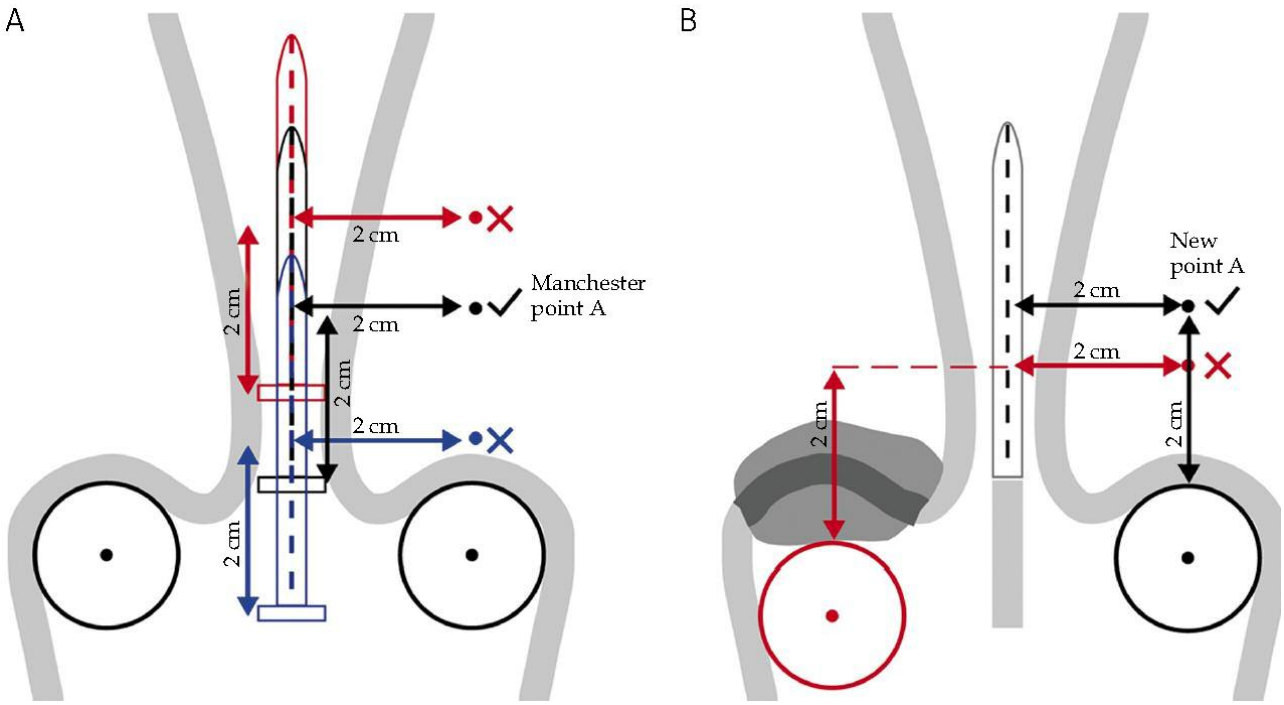
- Start date: 04/05/19 Completion date: 06/04/19
- Site: Pelvis, para-aortic and groins; Technique: VMAT; Modality: 10 MV; Dose: 50 Gy; Fractions: 25; Other: 45 Gy in 25 fractions to the pelvis, periaortic region and groin nodes. SIB of 50 Gy in 25 fractions to larger nodes in the right pelvis.

43

Clinical Case 6- Cervix…

EBRT Treatment Summary:

- Site: Left pelvic sidewall; Technique: AP/PA; Modality: 10 MV; Dose: 7.2 Gy; Fractions: 4; Other: Total point B dose approximately 59.4 Gy
- Site: Cervix; technique: Tandem and ovoid; Modality: HDR; Dose: 20 Gy; Fractions: 4
- Site: Cervix; Technique: Tandem and cylinder; Modality: HDR; Dose: 10 Gy; Fractions: 2; Other: Does normalized to point A, included anterior vagina to introitus given initial extent of disease



Clinical Case 6- Cervix

Start/End date = same for EBRT. HDR after.

Txt Site	Total Dose	Modality/Technique	Dose/ fx	Fx
Pelvis, para-aortic & groin LNs	5000 cGy	10 MV/ VMAT/ SIB	200	25
Pelvis, peri-aortic & groin LNs	4500 cGy	10 MV/VMAT/ SIB	180	25
LT pelvic sidewall	720 cGy	10 MV/ AP/PA	180	4
Cervix	2000	HDR, Tandem & ovoids	500	4
Cervix	1000	HDR, Tandem & cylinders	500	2

46

Clinical Case 6- Cervix…

How many phases???

3 Phases?

4 Phases?

- A case can be made for any of these approaches!

47

Summary	1	Rad/Surg Sequence	0 No RT and/or surgical procedures
	2	Reason No Rad	0 Radiation was admin..
	3	Location of Rad	1 All RT at this facility
	4	Date Started/Flag	4/5/19
	5	Date Finished/Flag	6/4/19
	6	Number of Phases	**04**
	7	Discontinued Early	01 Radiation 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	00200
	15	Total Phase 1 Dose	005000
Phase 2	16	Volume	71 Uterus or Cervix
	17	Rad to Nodes	06 Pelvic lymph nodes
	18	Modality	02 External beam, photons
	19	Planning Technique	05 IMRT
	20	Number of Fractions	025
	21	Dose per Fraction	00180
	22	Total Phase 2 Dose	004500
Phase 3	23	Volume (LT pelvic sidewall)	06 Pelvic lymph nodes
	24	Rad to Nodes	00 No RT to draining LNs
	25	Modality	0 External beam, photons
	26	Planning Technique	01 External beam, NOS
	27	Number of Fractions	004
	28	Dose per Fraction	00180
	29	Total Phase 3 Dose	000720

Case 6a Rationale:

#8: When EBRT + brachytherapy are administered, use this code for total dose summary.
#9: Primary site. Phase in chronological order.
#12: VMAT = IMRT
#13/20: # of fx same with SIB.
#23: Pelvic sidewall targets obturator lymph nodes.

If abstracted this way, you lose the most important HDR brachytherapy treatment!

Summary	1	Rad/Surg Sequence	0 No RT and/or surgical procedures
	2	Reason No Rad	0 Radiation was admin..
	3	Location of Rad	1 All RT at this facility
	4	Date Started/Flag	4/5/19
	5	Date Finished/Flag	6/4/19
	6	Number of Phases	**04**
	7	Discontinued Early	01 Radiation 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	00200
	15	Total Phase 1 Dose	005000
Phase 2	16	Volume	71 Uterus or Cervix
	17	Rad to Nodes	06 Pelvic lymph nodes
	18	Modality	02 External beam, photons
	19	Planning Technique	05 IMRT
	20	Number of Fractions	025
	21	Dose per Fraction	00180
	22	Total Phase 2 Dose	004500
Phase 3	23	Volume (HDR brachytherapy)	72 Vagina
	24	Rad to Nodes	00 No RT to draining LNs
	25	Modality	09 Brachytherapy, Intracavitary, HDR
	26	Planning Technique	88 Treatment not by external beam
	27	Number of Fractions	006
	28	Dose per Fraction	00500
	29	Total Phase 3 Dose	003000

Case 6B Rationale (Preferred):

#8: When EBRT + brachytherapy are administered, use this code for total dose summary.
#9: Phases in chronological order.
#12: VMAT = IMRT
#13/20: # of fx same with SIB.
#23: Both HDR treatments as a single phase. Not sufficiently altered to treat as separate phases.
#28-29: When dose/fx & total dose given in cGy for brachytherapy procedure, enter these values in the abstract.

Case 7: Cervical cancer

49 y/o female w/ h/o stage IIIC2 (T3aN2cM0), SCC of cervix, who opted for chemo/RT.

T&R= Tandem & Rings T&O= Tandem & Ovoids

Plan ID	Dose/fx (cGy)	# fractions	Total dose (cGy)	Start	End
Pelvis/PA/Cervix	205	29	5945	12/01/20	01/19/21
T&R Ir-192 boost	700	4	2800	12/29/20	1/21/21

Case 7- Cervical

Seg	#	Field	Code/Definition
Summary	1	Rad/Surg Sequence	0 No RT and/or surgical procedures
	2	Reason No Rad	0 Radiation was admin..
	3	Location of Rad	1 All RT at this facility
	4	Date RT Started/Flag	12/01/20
	5	Date RT Ended/Flag	01/21/21
	6	Number of Phases of RT	02
	7	RT Discontinued Early	01 Radiation completed
	8	**Total Dose**	**999998**
Phase 1	9	Primary Treatment Volume	71 Uterus or cervix
	10	Rad to Draining LNs	06 Pelvic LNs
	11	Treatment Modality	02 External beam, photons
	12	Planning Technique	01 External beam, NOS
	13	Dose per Fraction	00205
	14	Number of Fractions	029
	15	Phase I Total Dose	005945
Phase 2	16	Primary Treatment Volume	72 Vagina
	17	Rad to Draining LNs	00 No RT to draining LNs
	18	Treatment Modality	09 Brachy, intracavitary, HDR
	19	Planning Technique	88 NA
	20	Dose per Fraction	00700
	21	Number of Fractions	004
	22	Phase II Total Dose	002800
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 7 Rationale:
See Case 16 on CTR Guide, v3.0, page 26

#09: You cannot add dose from EBRT to brachytherapy.
#10: Pelvis is clearly specified. This is indicative of the regional LNs being irradiated.
#12: While it is very likely that the irradiated volume was treated with, at minimum, a 3D-conformal plan, and more likely an IMRT plan (given the site and OARs), we don't have sufficient information to code either. Review ARIA for more info.
#16: Use this code for vaginal cuff brachytherapy.
#20/22: Include brachytherapy dose, if given in cGy.

Case 7 Notepad Text

- 12/1/20-1/21/21 @ XXX Hospital: 1. Pelvis/cervix, 2.05 Gy x 29 fx= 59.45 Gy. 2. Vaginal cuff boost, Ir-192 HDR intracavitary brachytherapy, 7 Gy x 4 fx= 28 Gy.

Resources

- https://www.acr.org/Clinical-Resources/Practice-Parameters-and-Technical-Standards/Practice-Parameters-by-Subspecialty
- There are a couple of links you will find tremendously useful:
  - Radiation Oncology: General
  - Radiation Oncology: Radiation Therapy
    - NCCN Guidelines-provides therapeutic dose range for most sites.

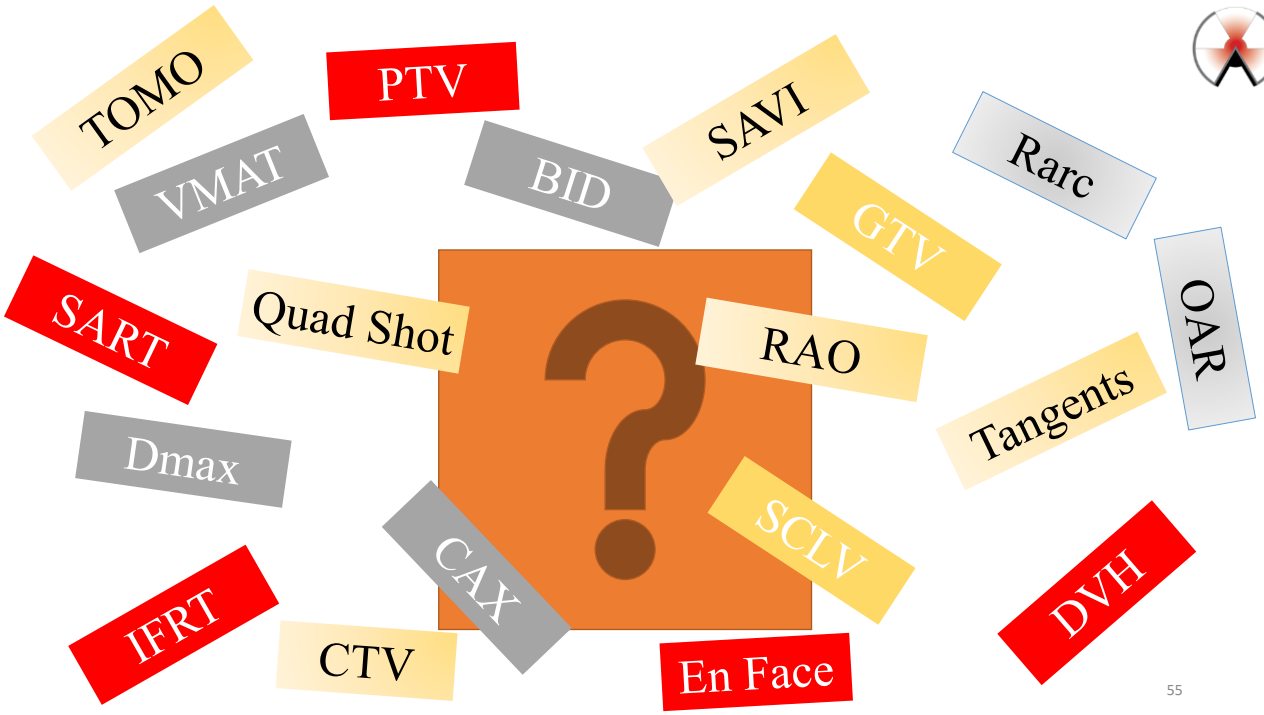
Resources

- "Understanding Radiation Therapy: A primer for tumor registrars". *Journal of Registry Management 2019, Vol46, number 3*
- "Online Adaptive Radiation Therapy" *Journal of Registry Management 2018, Vol45, number 2*
- https://cancerbulletin.facs.org/forums/

CTR Guide to Coding Radiation Therapy Treatment in the STORE

Christodouleas-Rationale-for-RT-data-items-in-STORE-2020Oct10

Williamson-Registrars Guide to Updating RT Data Items-2021Jan13




Questions

Coming UP…

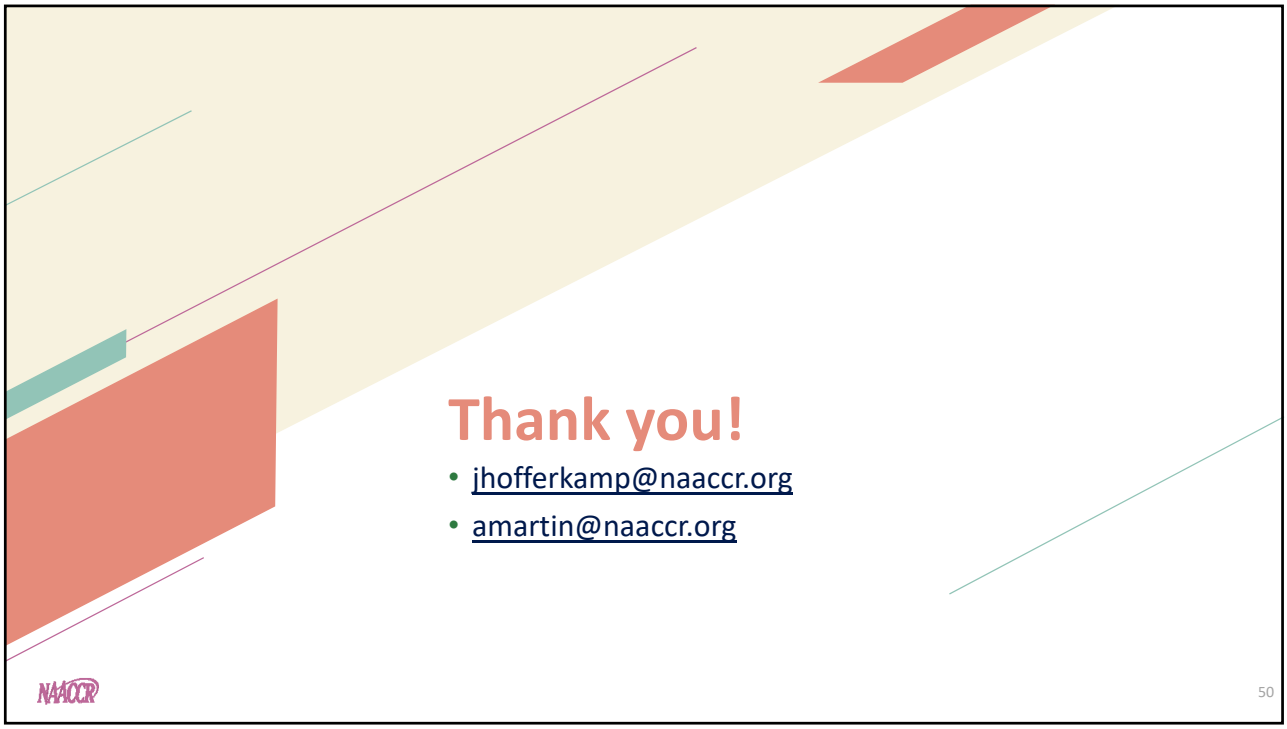
- Bladder 2021
  - Guest Hosts: Denise Harrison, CTR and Louanne Currence, RHIT, CTR
  - 11/4/2021
- Treatment 2021
  - Guest Host: Wilson Apollo, CTR
  - 12/2/21

CE Certificate Quiz/Survey

CE Phrase

Link

https://survey.alchemer.com/s3/6557606/Uterus-2021


Thank you!
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50