Collecting Cancer Data: Ovary
2015-2016 NAACCR Webinar Series

Q&A

• Please submit all questions concerning webinar content through the Q&A panel.
• Reminder:
• 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

Agenda

- Anatomy
- Multiple Primary and Histology Rules
- Epi Moment
- Staging
- Treatment
Anatomy

Fallopian Tubes
Ovaries
Uterus
Cervix
Vagina

Medulla
(contains neurovascular structures)

Cuboidal epithelium

Cortex
(contains ovarian follicles)

Hilum
Histology

- Epithelial tumors
  - Serous Cystadenocarcinoma
  - Mucinous cystadenocarcinoma
  - Endometrioid adenocarcinoma
  - Clear Cell Adenocarcinoma
  - Undifferentiated carcinoma
Histology

- Germ Cell tumors
  - Dysgerminoma
  - Endodermal Sinus Tumor
  - Embryonal carcinoma

- Sex cord-stromal tumors
  - Granulosa Cell tumor
  - Androblastoma
  - Other benign or borderline
Regional Lymph Nodes

- Iliac, NOS
- Pelvic, NOS
- Aortic
- Retroperitoneal, NOS
- Inguinal
- Lateral sacral

Ovary and Primary Peritoneal Carcinoma - Scientific Figure on ResearchGate. Available from: https://www.researchgate.net/278656652_fig12_Figure-2-2-Regional-lymph-nodes-of-the-ovary-and-primary-peritoneal-carcinomas [accessed 28 Mar, 2016]
Multiple Primary and Histology Rules

- Ovary is a paired organ so laterality will need to be coded
- Table 2 – Mixed and Combination Codes – refer to it when the rules tell you to
- Rule M7, M8,
- Rule H5, H16, H30
- Code Mixed Cell adenocarcinoma (8323)

Pop Quiz

- Patient presented to doctor with 4 month history of abdominal bloating and weight gain. Patient had pelvic ultrasound that revealed bilateral ovarian masses measuring 6cm on left and 10 cm on right. Patient underwent TAH BSO. Final diagnosis on pathology report revealed the same histology for both masses: Serous cystadenocarcinoma, grade 2.

- How many primaries? What is the histology(ies)?
  - 1 primary (M7)
  - 8441/32 (H18 or H23)
Pop Quiz

- Patient presents to doctor for yearly exam. Pelvic exam reveals enlarged uterus. Ultrasound done: 8 cm left adnexal mass. The left ovary could not be visualized. Patient had exploratory laparotomy followed by TAH-BSO. Final Diagnosis was invasive poorly differentiated papillary serous carcinoma, with mets to bladder, appendix and omentum.

- How many primaries? What is the histology(ies)?
  - 1 primary (M2)
  - 8460/33 (H11)

Questions?
And now a brief pause for...

An Epi Moment

(insert “All the Single Ladies” here)

Epidemiology of Ovarian Cancer

• Ranks 8th in incidence; 5th in mortality
• Incidence: 11.6 per 100,000 2009-2013
  • non-Hispanic Whites 12.2
  • non-Hispanic Blacks 9.5
  • non-Hispanic AI/AN 11.0
  • non-Hispanic A/PI 9.1
  • Hispanic 10.3
• Mortality: 7.5 per 100,000 2009-2013
  • Whites 7.8
  • Blacks 6.5
Epidemiology of Ovarian Cancer

- Predominately epithelial
  - 85-90%
  - the rest are either germ (reproductive) cell or stromal (connective tissue) cell tumors

- No population based screening
  - TVUS
  - Uses sound waves
  - Majority of masses found are false-positives

- CA-125
  - Tests for this protein in the blood
  - Useful as a tumor marker during tx, because a high level often goes down if treatment is working.
Risk Factors for Ovarian Cancer

- Highest in industrialized countries
- Non-Hispanic whites, particularly Ashkenazi Jewish
- 10% genetic predisposition
  - predominantly in the form of BRCA mutation
- Risk of epithelial ovarian cancer increases with age, 50+
- Germ cell tumors are most likely to be diagnosed before 35
- Stromal cell tumors vary by age at diagnosis depending on subtype.
- Hormonal component (# of lifetime menstruations)
  - Likely protective: Use of oral contraceptive pills, tubal ligation, hysterectomy and removal of the ovaries all appear to be protective
  - Possibly Protective: late onset of menstruation, menopause at a younger age, child bearing, and, potentially, lactation
  - Potential Risk: Certain medical conditions, such as endometriosis or Lynch II Syndrome, use of hormone replacement therapy, high body mass and high adult height

Ovarian Cancer Prognosis

Percent of Cases & 5-Year Relative Survival by Stage at Diagnosis: Ovary Cancer

<table>
<thead>
<tr>
<th>Percent of Cases by Stage</th>
<th>5-Year Relative Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localized (15%) Confined to Primary Site</td>
<td>92.1%</td>
</tr>
<tr>
<td>Regional (19%) Spread to Regional Lymph Nodes</td>
<td>73.2%</td>
</tr>
<tr>
<td>Distant (60%) Cancer Has Metastasized</td>
<td>28.3%</td>
</tr>
<tr>
<td>Unknown (6%) Unstaged</td>
<td>22.9%</td>
</tr>
</tbody>
</table>

SEER 18 2005-2011, All Races, Females by SEER Summary Stage 2000
Recent CiNA Publications

- [http://jco.ascopubs.org/content/early/2013/05/06/JCO.2012.45.5758.full.pdf](http://jco.ascopubs.org/content/early/2013/05/06/JCO.2012.45.5758.full.pdf)

Currently investigating survival trends
Questions?

Quiz 1

Staging

Summary Stage
TNM Stage
FIGO Stage
Summary Stage

Ovary
Primary Peritoneum

1-Localized

- Localized
  - Confined to one or both ovaries
  - Capsule intact or it is unknown if capsule has ruptured.

See Page 206
2-Regional by Direct Extension

- Regional by Direct Extension
  - Ruptured capsule
  - Extension to or implants on the adnexa
  - Extension to or implants organs or tissues in the pelvis or abdomen
  - Malignant ascites

See Page 206
7-Distant Metastasis

- Microscopic peritoneal implants beyond pelvis, including peritoneal surface of liver
  - FIGO Stage IIIA
- Macroscopic peritoneal implants beyond pelvis, <2 cm in diameter, including peritoneal surface of liver
  - FIGO Stage IIIB
- Peritoneal implants beyond pelvis, >2 cm in diameter, including peritoneal surface of liver
  - FIGO Stage IIIC
- Peritoneal implants, NOS
  - FIGO Stage III, not further specified

TNM and FIGO Staging
Rules for Classification

- Ovarian cancer is primarily surgically/pathologically staged
- A patient presents with symptoms
  - Palpable pelvic mass and/or ascites
  - Bloating, pelvic or abdominal pain
- Ultrasound, CT, MRI
- Biopsy is rarely done due to risk of rupturing a cyst

Stage I

- Tumor confined to one or both ovaries.
  - Are one or both ovaries involved?
  - Has the capsule ruptured?
  - Are there metastatic tumors on the ovarian surface?
  - Are there malignant ascites or peritoneal washings?
Case Scenario 1

- A patient had an ultrasound for kidney stones and was found to have an ovarian cyst. Follow-up ultrasound one month later showed the cyst had grown and the patient complained of abdominal discomfort. CA125 was normal. Her physician recommended an oophorectomy.
- During the procedure the cyst was found to be cancerous. The procedure was turned into TAHBSO with removal of two para-aortic and two pelvic lymph nodes.
- The tumor was confined to a single ovary with the capsule intact. Biopsies of the omentum, diaphragm, mesentery, and the lymph nodes were all negative.
Case Scenario 1

- What is the stage?

<table>
<thead>
<tr>
<th>T</th>
<th>N</th>
<th>M</th>
<th>Stage Group</th>
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<tbody>
<tr>
<td>Clin</td>
<td></td>
<td></td>
<td>99</td>
</tr>
<tr>
<td>Path</td>
<td>p1a</td>
<td>p0</td>
<td>c0</td>
</tr>
<tr>
<td>Summary Stage</td>
<td>1-Localized</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Case Scenario 2

- A patient with a history of BRCA positive breast cancer presented to her oncologist with abdominal pain. The oncologist noted her abdomen was swollen. An ultrasound and MRI showed a large cyst in the left ovary. She was scheduled for a TAH BSO.
- During the procedure the surgeon noted a tumor on the left ovary and implants on the fallopian tube and surface of the uterus.
- Pathology revealed serous adenocarcinoma of the left ovary with extension to the left fallopian tube.
  - Malignant implants were present on the serous surface of the uterus.
  - Biopsies of the omentum, diaphragm, and mesentery were negative.
  - Peritoneal washings were negative for malignant cells.
  - 12 retroperitoneal lymph nodes were negative for malignancy.
Case Scenario 2

- What is the stage?

<table>
<thead>
<tr>
<th>Data Items as Coded in Current NAACCR Layout</th>
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<tbody>
<tr>
<td>T</td>
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<tr>
<td>Clin</td>
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<tr>
<td>Path</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Summary Stage</td>
</tr>
</tbody>
</table>

Intraperitoneal vs Retroperitoneal

- Intraperitoneal
  - Organ total covered and supported by peritoneum
    - Ovary
    - Liver
    - Transverse colon
    - ...

- Retroperitoneal
  - Anterior surface is covered by peritoneum
    - Aorta, IVC
    - Kidney
    - Adrenal glands
    - ...
Blood Supply

- Right ovarian vein comes off the IVC
- Left ovarian vein comes off the renal vein
- Both are retroperitoneal

[Diagram image]

Stage III

- Patient has microscopically confirmed peritoneal metastasis outside of the pelvis
  - In this context “microscopically” means confirmed by a pathologist.
- Stage IIIA is microscopic metastasis.
  - This means the tumor is too small to be seen by the naked eye.

[Diagram image]
Stage IIIB & IIIC

- Tumor metastasis visible to the naked eye
  - T3b-2cm or less in size
  - T3c-more than 2cm in size
- Regional lymph node metastasis
  - Para aortic
  - Pelvic
  - Inguinal

FIGO Stage III

| STAGE III: Tumor involves 1 or both ovaries with cytologically or histologically confirmed spread to the peritoneum outside the pelvis and/or metastasis to the retroperitoneal lymph nodes |
|---|---|
| OLD | NEW |
| IIIA | Microscopic metastasis beyond the pelvis. |
| IIIA1 | Positive retroperitoneal lymph nodes only |
| IIIA1(i) | Metastasis ≤ 10 mm |
| IIIA1(ii) | Metastasis > 10 mm |
| IIIA2 | Microscopic, extrapelvic (above the brim) peritoneal involvement ± positive retroperitoneal lymph nodes |
| IIIB | Macroscopic, extrapelvic, peritoneal metastasis ≤ 2 cm in greatest dimension. |
| IIIB | Macroscopic, extrapelvic, peritoneal metastasis > 2 cm ± positive retroperitoneal lymph nodes. Includes extension to capsule of liver/spleen. |
| IIIC | Macroscopic, extrapelvic, peritoneal metastasis > 2 cm ± positive retroperitoneal lymph nodes. Includes extension to capsule of liver/spleen. |
Case Scenario 3

- A patient presented complaining of unusual pressure her colon and bladder. A CT scan was done and showed wide-spread tumor in the abdomen and the peritoneal walls. A 4cm tumor was noted on the surface of the liver.
- The patient underwent a TAHBSO with cytoreductive surgery. All visible tumor was removed. Pathology returned grade 3 mucinous adenocarcinoma. A retroperitoneal lymphadenectomy was performed and 33 retroperitoneal lymph nodes were negative for metastasis.

What is the stage?

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<td>Summary Stage</td>
</tr>
</tbody>
</table>
Stage IV

- Distant metastasis
  - Extraperitoneal sites
    - Liver parenchyma
    - Lung
    - Pleural effusion (confirmed)
    - Supraclavicular and axillary nodes

<table>
<thead>
<tr>
<th>STAGE IV: Distant metastasis excluding peritoneal metastasis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OLD</strong></td>
</tr>
<tr>
<td>IV</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Case Scenario 4

- An 84 year old female presents for a chest and abdominal CT. She is found to have a pleural effusion and a tumor in her liver.
  - A thoracentesis revealed malignant cells.
  - A biopsy of the liver lesion was positive for adenocarcinoma, most likely from an ovarian primary.
- The patient did not return for any additional workup or treatment.

• What is the stage?

<table>
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<tr>
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<tr>
<td>T</td>
</tr>
<tr>
<td>Clin</td>
</tr>
<tr>
<td>Path</td>
</tr>
<tr>
<td>Summary Stage</td>
</tr>
</tbody>
</table>
Neoadjuvant Therapy

- Standard treatment for stage III or IV disease is debulking followed by chemotherapy.
- For patients receiving neoadjuvant therapy, chemotherapy is given followed by a debulking procedure (and then possibly more chemo).

Primary Peritoneal

- Ovaries are not involved or only surface implants
- Prognosis and treatment is similar to patients with papillary serous carcinoma of the ovary.
- These cases typically present with stage III or IV disease.
SSF1: Carbohydrate Antigen 125 (CA-125)

- Tumor marker useful in monitoring treatment and recurrence of ovarian cancer
- Record clinician’s interpretation of highest CA-125 value prior to treatment
- Record blood or serum CA-125 NOT results from fluid of chest or abdominal cavity

Pop Quiz

- Pelvic CT scan: 3 cm mass of right ovary, probably malignant.
- CA-125: 24 u/ml (Normal 1-35)
- Bilateral TAH BSO: Cystadenocarcinoma confined to right ovary. No malignancy in other tissues.
- What is the code for SSF1?
  - 010: Positive/elevated
  - 020: Negative/normal
  - 030: Borderline
  - 987: Test ordered, results not in chart
SSF2: FIGO Stage

- Federation of Gynecology and Obstetrics (FIGO) stage
  - Collected for all gynecologic sites
  - Adapted in AJCC staging
  - In situ stage no longer included for ovary
    - Record code 987
- Record FIGO stage as documented in patient’s health record
  - Registrar should not code FIGO stage based on T, N, & M categories

SSF2: FIGO Stage

- FIGO Stage I: Tumor limited to ovaries (1 or both)
  - Codes 100 – 130
- FIGO Stage II: Tumor involves 1 or both ovaries with pelvic extension
  - Codes 200 – 230
- FIGO Stage III: Tumor involves 1 or both ovaries with microscopically confirmed peritoneal metastasis outside the pelvis
  - Codes 300 – 330
  - IIIC: Peritoneal metastasis outside the pelvis > 2 cm AND/OR regional node metastasis (Code 330)
- FIGO Stage IV: Distant metastasis
  - Code 400
Pop Quiz

- Bilateral TAH BSO: Cystadenocarcinoma confined to right ovary. No malignancy in other tissues.
- What is the code for SSF2?
  - 100: FIGO Stage I
  - 110: FIGO Stage IA
  - 987: Carcinoma in situ
  - 999: Unknown

SSF3: Residual Tumor Status & Size After Primary Cytoreduction

- Cytoreductive surgery (debulking)
  - Surgical removal of as much cancer in pelvis and/or abdomen as possible so chemotherapy is more effective
- Record whether patient had chemotherapy prior to cytoreductive surgery and the amount of residual tumor
- Residual disease after surgery is most important prognostic factor for patients with advanced ovarian cancer
Pop Quiz

- Right salpingo-oophorectomy, left ovarian cystectomy, omentectomy, and unilateral pelvic/periaortic lymphadenectomy operative report:
  - 30cm right adnexal mass which, on frozen, was consistent with mucinous cystadenocarcinoma
  - Left ovary enlarged and consistent with fibroma
  - The left ovarian mass was excised with healthy ovary left behind
  - Pelvic/periaortic nodes appeared normal as did the omentum and upper abdomen, including liver and diaphragm, and the rest of the pelvis.
- Path report: Right ovary had mucinous borderline tumor with intraepithelial carcinoma
  - The left ovarian tumor showed Brenner tumor
  - The lymph nodes and omentum were negative
  - Pelvic wash was negative.

Pop Quiz

- What is the code for SSF3?
  - 000: No gross residual tumor nodules
  - 010: Residual tumor nodule(s) 1 centimeter (cm) or less AND neoadjuvant chemotherapy not given or unknown if given
  - 990: Macroscopic residual tumor, size not stated AND neoadjuvant chemotherapy not given or unknown if given
  - 998: No cytoreductive surgery performed
Clinical Staged By & Pathologic Staged By

- Identifies the person who recorded the clinical AJCC staging elements and the stage group in the patient’s medical record.

**Codes**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>Not Staged</td>
</tr>
<tr>
<td>10</td>
<td>Physician, NOS, or physician type not specified in codes 11-15</td>
</tr>
<tr>
<td>11</td>
<td>Surgeon</td>
</tr>
<tr>
<td>12</td>
<td>Radiation Oncologist</td>
</tr>
<tr>
<td>13</td>
<td>Medical Oncologist</td>
</tr>
<tr>
<td>14</td>
<td>Pathologist</td>
</tr>
<tr>
<td>15</td>
<td>Multiple Physicians; tumor board, etc.</td>
</tr>
<tr>
<td>20</td>
<td>Cancer registrar</td>
</tr>
<tr>
<td>30</td>
<td>Cancer registrar and physician</td>
</tr>
<tr>
<td>40</td>
<td>Nurse, physician assistant, or other non-physician medical staff</td>
</tr>
<tr>
<td>50</td>
<td>Staging assigned at another facility</td>
</tr>
<tr>
<td>60</td>
<td>Staging by Central Registry</td>
</tr>
<tr>
<td>88</td>
<td>Case is not eligible for staging</td>
</tr>
<tr>
<td>99</td>
<td>Staged but unknown who assigned stage</td>
</tr>
</tbody>
</table>

Tumor Size

- Tumor Size Summary
- Tumor Size Clinical (SEER Only)
- Tumor Size Pathologic (SEER Only)
Treatment

- Surgery
  - Debulking
- Chemotherapy
- Targeted Therapy
- Radiation Therapy
- Clinical Trials
Surgery

- 35 Unilateral (salpingo-)oophorectomy, unknown if hysterectomy done
  - 36 without Hysterectomy
  - 37 with hysterectomy

- 50 Bilateral (salpingo-)oophorectomy; unknown if hysterectomy done
  - 51 without hysterectomy
  - 52 with hysterectomy
Surgery

• 55 Unilateral/Bilateral (salpingo-)oophorectomy with Omentectomy, NOS; partial or total; unknown if hysterectomy done
  • 56 without hysterectomy
  • 57 with hysterectomy

• 60 Debulking; cytoreductive surgery, NOS
  • 61 with colon (including appendix) and/or small intestine resection (not incidental)
  • 62 with partial resection of urinary tract (not incidental)
  • 63 Combination of 61 and 62
Pop Quiz

The patient had a hysterectomy w/ BSO for benign reasons years prior to diagnosis at another facility. The patient undergoes exploratory laparotomy, resection of left pelvic sidewall mass, right and left pelvic and obturator lymphadenectomy, right and left common and low para-aortic lymphadenectomy, omentectomy, debulking, and left inguinal lymph node debulking at our facility. A total of 33 lymph nodes removed. The pathology diagnosis is papillary serous adenocarcinoma c/w ovarian primary.

What should I code surgery to primary site?
- 60 Debulking, cytoreductive surgery, NOS


Case Scenarios
Coming Up…

- Collecting Cancer Data: Kidney
  - 5/5/2016
- Collecting Cancer Data: Prostate
  - 6/2/2016

And the winners are…
CE Certificate Quiz/Survey

- Phrase
  - Peritoneum

- Link

Thank You!!!!

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