Cancer of The Cervix

Introduction

- Cancer cervix is a disease that is usually assessed by the surgery and radiation therapy staff at the initial presentation to our cancer institute.
- Those patients with advanced; metastatic, recurrent cancers usually exhaust their initial local therapies and are referred to us to receive palliative chemotherapy as feasible after careful assessment for this treatment modality.

Initial Workup

- Clinical assessment including:
  - Performance status and
  - Gynecological examination.
- Pathology review
- Laboratory Investigations:
  - Complete blood count (CBC),
  - Chemistry profile.
- Imaging:
  - Chest X-ray
  - Magnetic resonance imaging (MRI) is superior to CT scan for tumor extension assessment and
  - MRI is equal to CT scan for nodal assessment.
  - Thoracic CT scan may be included for metastasis assessment.
  - PET scan is optional.

WHO histological classification of tumors of the uterine cervix

<table>
<thead>
<tr>
<th>Epithelial tumors</th>
<th>Mixed epithelial and mesenchymal tumors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Squamous tumors and precursors</td>
<td>Carcinosarcoma</td>
</tr>
<tr>
<td>Glandular tumors and precursors</td>
<td>Adenosarcoma</td>
</tr>
<tr>
<td>Neuroendocrine tumors</td>
<td>Wilm’s tumor</td>
</tr>
<tr>
<td>Undifferentiated carcinoma</td>
<td>Melanocytic tumors</td>
</tr>
<tr>
<td>Mesenchymal tumors and tumor-like conditions</td>
<td>Malignant melanoma</td>
</tr>
<tr>
<td>Leiomyosarcoma</td>
<td>Miscellaneous tumors</td>
</tr>
<tr>
<td>Endometrioid stromal sarcoma (low grade)</td>
<td>Tumors of germ cell type</td>
</tr>
<tr>
<td>Undifferentiated endocervical sarcoma</td>
<td>Yolk sac tumor</td>
</tr>
<tr>
<td>Sarcoma botryoides</td>
<td>Dermoid cyst</td>
</tr>
</tbody>
</table>
### FIGO Staging

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>In situ</td>
</tr>
<tr>
<td>I</td>
<td>Confined to uterus</td>
</tr>
<tr>
<td>IA</td>
<td>Diagnosed only by microscopy</td>
</tr>
<tr>
<td>IA1</td>
<td>Depth ≤ 3 mm, horizontal spread ≤ 7 mm</td>
</tr>
<tr>
<td>IA2</td>
<td>Depth &gt; 3-5 mm, horizontal spread ≤ 7 mm</td>
</tr>
<tr>
<td>IB</td>
<td>Clinically visible or greater than microscopic lesion</td>
</tr>
<tr>
<td>IB1</td>
<td>≤ 4 cm</td>
</tr>
<tr>
<td>IB2</td>
<td>&gt; 4 cm</td>
</tr>
<tr>
<td>II</td>
<td>Beyond uterus but not pelvic wall or lower third vagina</td>
</tr>
<tr>
<td>IIA</td>
<td>No parametrium</td>
</tr>
<tr>
<td>IIB</td>
<td>Parametrium</td>
</tr>
<tr>
<td>III</td>
<td>Lower third vagina/pelvic wall/ hydronephrosis</td>
</tr>
<tr>
<td>IIIA</td>
<td>Lower third vagina</td>
</tr>
<tr>
<td>IIIB</td>
<td>Pelvic wall/hydronephrosis</td>
</tr>
<tr>
<td>IVA</td>
<td>Mucosa of bladder/rectum; beyond true pelvis</td>
</tr>
<tr>
<td>IVB</td>
<td>Distant metastasis</td>
</tr>
</tbody>
</table>

### Treatment

A general approach to the treatment of cancer cervix based on the stage of the disease.

#### FIGO Stage IA1

- Conization with free margins or simple hysterectomy (according to patient age).
- In the case of lymphovascular space involvement:
  - Pelvic lymphadenectomy is recommended.
- In patients with pelvic node involvement:
  - Standard treatment consists of complementary concomitant chemo-radiation.
### FIGO Stage IA2

- Surgery is the standard including:
  - Conization or trachelectomy in young patients and
  - Simple or radical hysterectomy in other patients.
- Pelvic lymphadenectomy is required.
- Complementary concomitant chemo-radiation in patients with pelvic node involvement.

### FIGO Stage IA2

- There is no standard treatment.
- Options consist of:
  - Surgery,
  - External irradiation plus brachytherapy or
  - Combined radio-surgery.
- Standard surgery consists of:
  - Radical hysterectomy,
  - Bilateral oophorectomy (optional) and
  - Pelvic Lymphadenectomy.
- Combined radio-surgery usually consists of preoperative brachytherapy followed 6–8 weeks later by surgery.
- Complementary concomitant chemo-radiation is the standard treatment in patients treated with upfront surgery or preoperative brachytherapy followed by surgery with pelvic node involvement.

### FIGO Stage IB2–IVA

- Concomitant chemo-radiation is the standard of care.
- Platinum-based regimens for chemo-radiation remain the standard.
- External irradiation is combined with brachytherapy.
- A complementary extra-fascial hysterectomy is an option.
- Neoadjuvant chemotherapy remains controversial.

### FIGO Stage IVB

- Cisplatin/paclitaxel/bevacizumab
- Platinum-based combination chemotherapy.
- Carboplatin/paclitaxel.
- Carboplatin/gemcitabine.
- Topotecan/paclitaxel
## Locoregional and Metastatic Recurrence

- For most patients, palliative platinum-based combination chemotherapy is the standard.
- Pelvic exenteration and radiotherapy are other treatment options for selected cases.

## Second-line Therapy

<table>
<thead>
<tr>
<th>Bevacizumab</th>
<th>Irinotecan</th>
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</thead>
<tbody>
<tr>
<td>Albumin-bound paclitaxel</td>
<td>Mitomycin</td>
</tr>
<tr>
<td>Docetaxel</td>
<td>Pemetrexed</td>
</tr>
<tr>
<td>5-FU (5-fluorouracil)</td>
<td>Topotecan</td>
</tr>
<tr>
<td>Gemcitabine</td>
<td>Vinorelbine</td>
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<tr>
<td>Ifosfamide</td>
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</table>

## Follow Up

- Clinical follow up with gynecological examination including pap smear are performed:
  - Every 3 months for the first 2 years, then
  - Every 6 months for the next 3 years and
  - Yearly thereafter.