Management of Cervical Cancer in Resource Limited Settings

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• 84% of incidence and death occur in LMIC.
• Fourth highest cause of cancer-related death in women.
• Mortality varies 18-fold among different regions of the world.
• Most available guidelines address women and clinicians in high-resource settings.

• Resource stratified guidelines
  – NCCN (2016 version 2)
  – ASCO (2016)
Barriers

• Lack of access to surgeons trained to perform radical surgeries or to radiation.

• Challenges in acquiring routine supplies of chemotherapy and radiation equipment.

• Recommendations are based on weak evidence.

• Practitioners should offer treatments recommended for enhanced/maximal settings whenever possible.
### Resource Stratified Settings

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
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<tbody>
<tr>
<td>Basic</td>
<td>Essential services providing basic minimal standard of care</td>
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<tr>
<td>Limited/Core</td>
<td>Additional services available to provide major improvement in outcomes that are not cost prohibitive - Limited surgeons to perform radical hysterectomy and radiation machines. Chemotherapy drugs are not always available.</td>
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<tr>
<td>Enhanced</td>
<td>Additional services available to provide lesser improvement in outcomes that may be cost prohibitive</td>
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<tr>
<td>Maximal/NCCN</td>
<td>Further lesser improvement in outcomes</td>
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<table>
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<th>LIMITED (ASCO) OR CORE (NCCN)</th>
<th>ASCO</th>
<th>NCCN</th>
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</table>
| **IB1 – IIA1**                | 1. Rad hys (RH)  
2. CCRT  
3. Neoadjuvant CT (NACT) followed by RH or hys **if no RT** | 1. RH  
2. CCRT |
| **IB2 – IIA2**                | 1. NACT followed by RH  
2. CCRT followed by hys **if no brachytherapy**  
3. Brachytherapy and concurrent CT followed by RH **if no EBRT**  
4. RH | 1. CCRT  
2. RH |

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<td>IIB, IIIA</td>
<td>1. CCRT or RT followed by extrascial or modified hys 2. NACT followed by hys 3. Extrafascial or modified hys plus adjuvant therapy</td>
<td>1. CCRT 2. NACT followed by RH 3. CCRT followed by RH 4. RT ± CT if no brachytherapy and surgery</td>
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<tr>
<td>IIIB, IVA</td>
<td>1. CCRT or RT followed by hys 2. NACT followed by hys 3. CCRT plus adjuvant CT</td>
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Key Points: Lack of Radiation Machines

- Early-stage disease
  - Extrafascial hysterectomy or its modifications.
  - Neoadjuvant chemotherapy followed by surgery is recommended.
- Shorter radiation fractionation schemes with curative intent may be used.
Key Points:
Lack of Brachytherapy

• Options:
  – 50.4 Gy CCRT followed by radical hysterectomy.
  – CCRT with a boost of 68 Gy followed by extrafascial hysterectomy if there is residual disease or initial tumor >6cm.
Future Directions

• Too many patients and too few radiation machines
  – Hypofractionation? – TRIAL?

• Unpredictable chemotherapy supply
  – Radiation without chemotherapy? – RT

• Lack of surgeons to perform radical hysterectomy
  – Extrafascial or its modification for early cervical cancer? – SHAPE/ConCerv trial
  – IGCS gynecologic oncology fellowship or SGO/ASCO/HVO training program

• No brachytherapy
  – NACT followed by CCRT randomized to RH vs extrafascial hys trial (CANTU’S TRIAL?)

• Palliation: care, radiation and surgery

References

- Clinical trials in low and middle-income countries – successes and challenges 2017 (PMID: 28004030).
- Brachytherapy versus radical hysterectomy after external beam chemoradiation with gemcitabine plus cisplatin: a randomized, phase III study in IB2-IIB cervical cancer patients (PMID: 23609186).

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