Health, equity, and women’s cancers

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Interventions to close the divide for women with breast and cervical cancer between low-income and middle-income countries and high-income countries:

Burden of breast and cervical cancer
<table>
<thead>
<tr>
<th>Cancer incidence</th>
<th>LMI Cs</th>
<th>HI Cs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast cancer</td>
<td>883 000</td>
<td>788 000</td>
</tr>
<tr>
<td>Cervix cancer</td>
<td>445 000</td>
<td>83 000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cancer deaths</th>
<th>LMI Cs</th>
<th>HI Cs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast cancer</td>
<td>324 000</td>
<td>198 000</td>
</tr>
<tr>
<td>Cervix cancer</td>
<td>230 000</td>
<td>36 000</td>
</tr>
</tbody>
</table>

Interventions to close the divide for women with breast and cervical cancer between low-income and middle-income countries and high-income countries

- Breast and cervical cancers are the commonest cancers diagnosed in women in LMICs
- The differences in access to screening, early diagnosis, staging, biological categorization, treatment and follow-up care for these two cancers strikingly differ between HICs and LMICs
- Several cost-effective interventions could be used to reduce the burden of these two cancers in LMICs and to close the divide
Feasible and effective interventions for breast cancer control in LMICs and in bridging the divide

- Breast awareness among the public and health care professionals
- Clinical breast examination (CBE) screening
- Early diagnosis using triple testing: expert CBE, diagnostic imaging (USS/mammography), FNAC
- Histopathology of tissue samples
- Testing for oestrogen receptor using IHC
- Staging
- Treatment of early stage disease and follow-up care: access to care
Availability of and access to breast cancer multimodality treatment and follow-up care in LMICs

- Breast cancer surgery
- Radiotherapy
- Systemic chemotherapy / hormone therapy/ or both
- Targeted therapy: trastuzumab (currently included in the WHO model EML)
- Absence/deficiencies in treatment do significantly disadvantage women with breast cancer in many LMICs
Essential medicines for breast cancer in LMICs

- NEMLs from 75 LMICs were studied for inclusion essential medicines for breast cancer management.
- Tamoxifen and first generation chemotherapeutic agents were found in 71% and 78% of NEMLs.
- Taxanes were found in 28% of NEMLs.
- HER2-targeted therapies were found in <10% and aromatase inhibitors in 12% NEMLs.
- 40% of the low-income countries did not have all the components of therapy for any type of early breast cancer in their NEMLs.
Inclusion of main chemotherapeutic and hormonal therapy regimens in NEMLs (n=75)

CMF: cyclophosphamide, methotrexate and fluorouracil;
CAF: cyclophosphamide, doxorubicin (adriamycin), fluorouracil,
AC: doxorubicin and cyclophosphamide;
EC: epirubicine and cyclophosphamide;
CEF: cyclophosphamide, epirubicine and fluorouracil;
DCa: docetaxel and carboplatin;
DC: docetaxel and cyclophosphamide;
AIs: Aromatase Inhibitors
5 year survival from breast cancer, Trivandrum district, India

<table>
<thead>
<tr>
<th>Stage</th>
<th>Total Number</th>
<th>5-year survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>34</td>
<td>100%</td>
</tr>
<tr>
<td>Stage II</td>
<td>147</td>
<td>92%</td>
</tr>
<tr>
<td>Stage III</td>
<td>128</td>
<td>67%</td>
</tr>
<tr>
<td>Stage IV</td>
<td>31</td>
<td>33%</td>
</tr>
</tbody>
</table>
Feasible and effective interventions for cervix cancer control in LMICs and in bridging the divide

- HPV vaccination
- Naked eye VIA, magnified VIA, digital VIA screening
- HPV testing based screening
- Single visit screen-and-treat approach / treatment of cervical precancerous lesions
- Early diagnosis and treatment of early stage disease
Countries with HPV vaccine in the national immunization programme

- Includes partial introduction

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- Introduced* to date (69 countries or 35.6%)
- Not WHO Member State or Not Introduced/No Plans (125 countries or 64.4%)
- Not applicable

* Includes partial introduction
Treatment of cervical cancer stage “0” - precancer

Cryotherapy

Thermocoagulation

Loop Electrosurgical Excision Procedure (LEEP)
Countries/provinces with large scale VIA screening and HPV screening programs
Programmatic introduction of HPV testing in Jujuy Province, Argentina

- 270 public health centres in Jujuy province offered HPV testing in 2012
- 22,515 women (30+) have been HPV tested
- 2861 (12.7%) of women HPV +ve
- 807 (28.2%) HPV +ve women were cytology positive and 627 complied with colposcopy/diagnosis referral
- 301 CIN 2+ lesions detected (DR 1.3%)
- 90% of CIN 2+ women received treatment

Arrossi et al., Int J Cancer. 2015 Oct 1;137(7):1709-18
Low- and middle-income countries/provinces with large scale Cytology screening programs
Investments needed for closing the divide

- Engaging politicians, policy makers and creating and sustaining political will
- Health care financing; Universal health care
- Improving awareness among the public and primary care providers and empowering them
- Engaging primary care services in cancer control
- Developing effective referral pathways and patient navigation systems
- Strengthening health care infrastructure in public health services
- Training sufficient human resources and improving trained human resources in public health services
- Initial high vertical financial and health systems investments to develop facilities and resources are essential and such investments would facilitate expansion and augmentation basic cancer health services