

2014 Integrated Africa Cancer Factsheet *Focusing on Cervical Cancer + Girls & Women Health / Sexual & Reproductive Health, HIV & Maternal Health*

Cervical Cancer At A Glance

Incidence / Prevalence / Mortality:

Cervical cancer is the fourth most common cancer in women, and seventh overall, with an estimated 528,000 new cases in 2012. Majority of the global burden (around 85%) occurs in the less developed regions, where it accounts for almost 12% of all female cancers. High-risk regions, with estimated Age Standardised Rate (ASR) of over 30 per 100,000, include: Eastern Africa 42.7; Southern Africa 31.5; Middle/Central Africa 30.6; – with Western Africa on the border line of high risk at 29.3. (See Fig. 1)

There were an estimated 266,000 global deaths from cervical cancer in 2012, accounting for 7.5% of all female cancer deaths. Almost nine out of ten (87%) cervical cancer deaths occur in less developed regions. Mortality varies 18-fold between different regions of the world, with rates ranging from less than 2 per 100,000 in Western Asia, Western Europe and Australia/New Zealand to more than 20 per 100,000 in Middle/Central Africa 22.2; and Eastern Africa 27.6. Western Africa is not far behind at 18.5.

Risk Factors - & Intersection with SRHR, HIV, & Maternal Health:

Most cervical cancers are caused by infection with certain types of human papillomavirus (HPV).

Women who begin having sex at an early age (adolescent or girl children) are at increased risk for HPV infection and cervical cancer. A woman can be infected with HPV even if she has had only one sexual partner, and risk increases with women that have had many sexual partners.

HPV infections are common in healthy women but usually cleared by the immune system. Persistence of HPV infection and progression to cancer may be influenced by many factors: including suppressed immune system; high number of live childbirths / high fertility rate; and cigarette smoking. Long-term use of oral contraceptives (birth control pills) is also associated with increased risk; Women with HIV/AIDS are at increased risk of cervical cancer.

Infection with the human papillomavirus (HPV) also increases risk of both vulvar cancer, vaginal cancer and associated pre-cancerous lesions.

Women with a sister or mother who has had cervical cancer are also at increased risk.

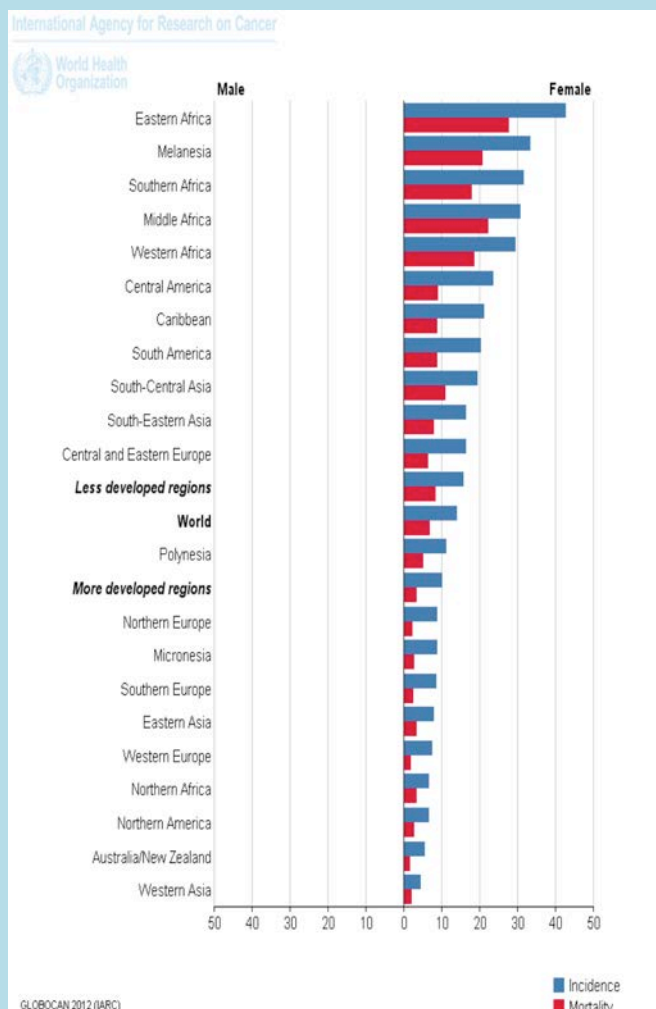
Prevention: Vaccination and Screening

Safe and effective vaccines protect against HPV types 16 and 18 which cause about 70% of cervical cancer cases. Vaccination against HPV is effective when administered before a person is infected.

Immunising girls before initiation of sexual activity - that is before first exposure to HPV infection - is a vital strategy to prevent cervical cancer. The World Health Organization (WHO) recommends HPV vaccination of girls aged 9-13 years through national immunisation programmes.

However, cervical cancer is also preventable among unvaccinated women if pre-cancerous lesions are detected and treated early – dependent on effective screening country programs. In the past few decades, effective screening has reduced cervical cancer morbidity and mortality in industrialised countries.

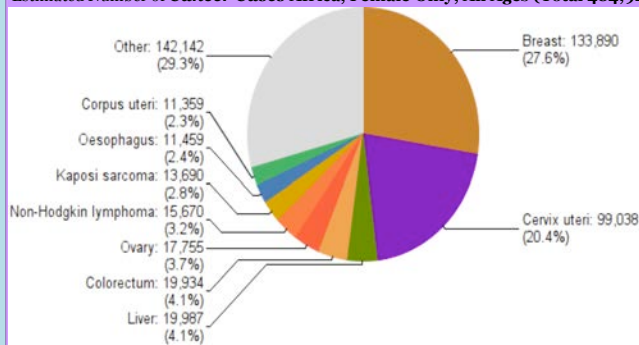
Figure 1: Cervical Cancer: Estimated Age-Standardised Rate (World / Regions) per 100,000



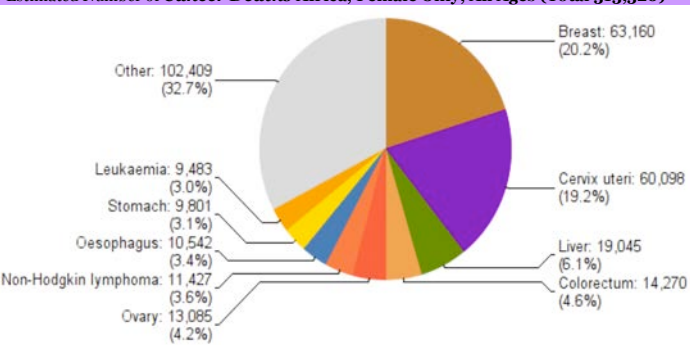
Cost: The GAVI Alliance has worked with manufacturers to lower vaccine prices making them more affordable to developing countries. As a result, GAVI achieved a price of US \$4.50, a two-thirds reduction on current lowest public price for HPV quadrivalent vaccine. As HPV vaccines are rolled out in the developing world, further price reductions are expected (Contd on pg 3).

Figure 2a & 2b: All Cancers Africa - At A Glance (Female Only)

Estimated Number of **Cancer Cases** Africa, Female Only, All Ages (Total 484,924)



Estimated Number of **Cancer Deaths** Africa, Female Only, All Ages (Total 313,320)



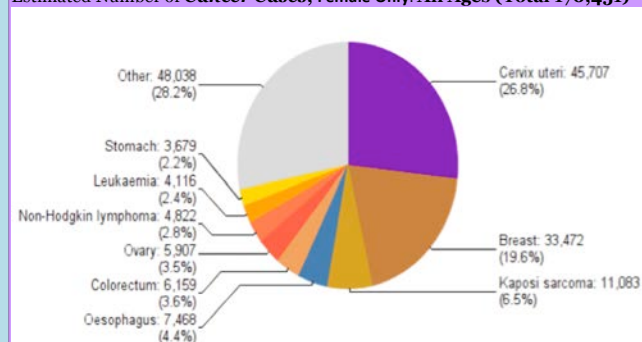
Source: GLOBOCAN 2012 (IARC) Section of Cancer Surveillance (15/7/2014)

This Factsheet is produced with kind partnership support of:

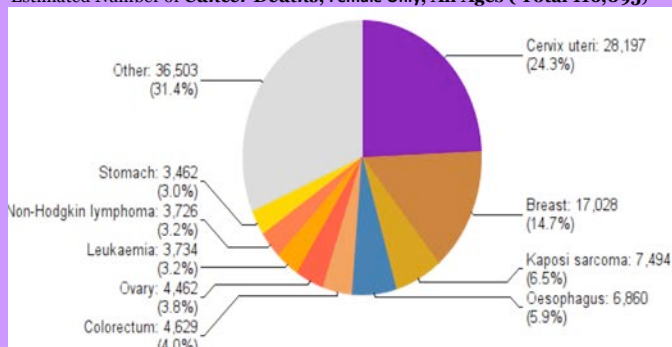
All Cancers (Female Only) At A Glance - By African Sub Regions

Figures 3a & 3b: Eastern Africa

Estimated Number of **Cancer Cases**, Female Only: All Ages (Total 170,451)

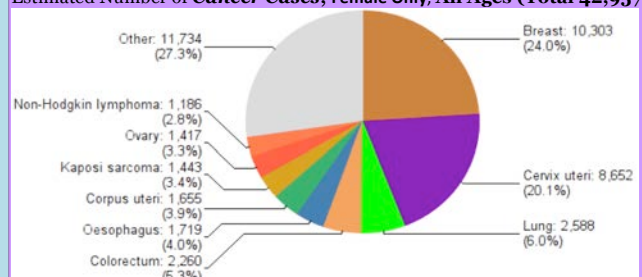


Estimated Number of **Cancer Deaths**, Female Only: All Ages (Total 116,095)

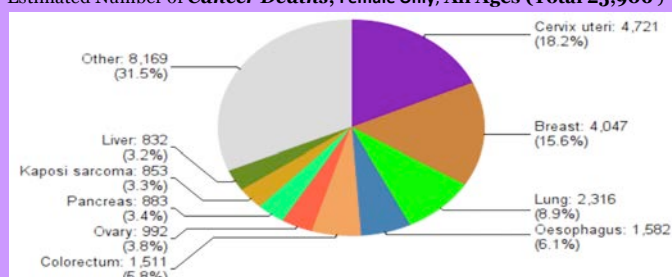


Figures 4a & 4b: Southern Africa

Estimated Number of **Cancer Cases**, Female Only: All Ages (Total 42,957)

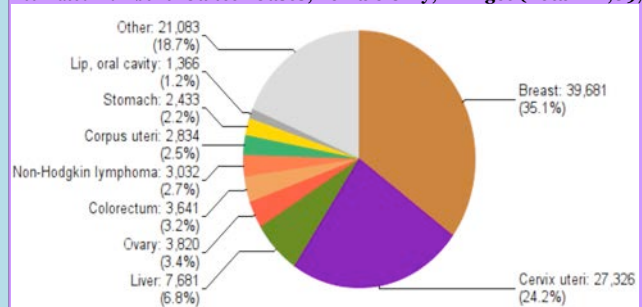


Estimated Number of **Cancer Deaths**, Female Only: All Ages (Total 25,906)

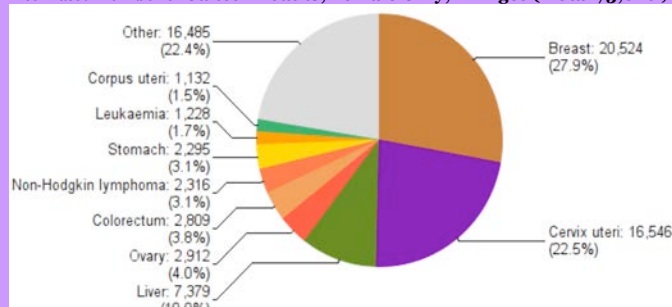


Figures 5a & 5b: Western Africa

Estimated Number of **Cancer Cases**, Female Only: All Ages (Total 112,897)

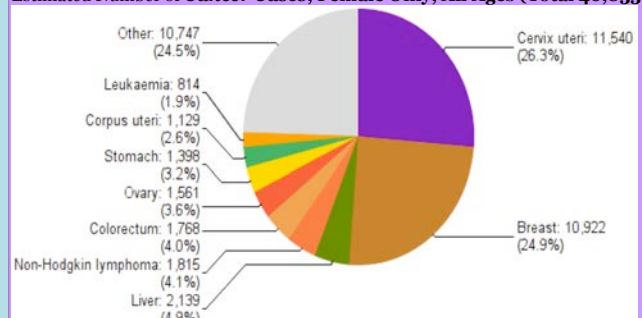


Estimated Number of **Cancer Deaths**, Female Only: All Ages (Total 73,626)

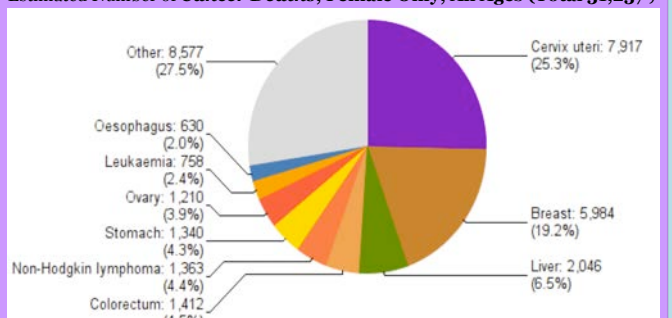


Figures 6a & 6b: Middle/Central Africa

Estimated Number of **Cancer Cases**, Female Only: All Ages (Total 46,833)

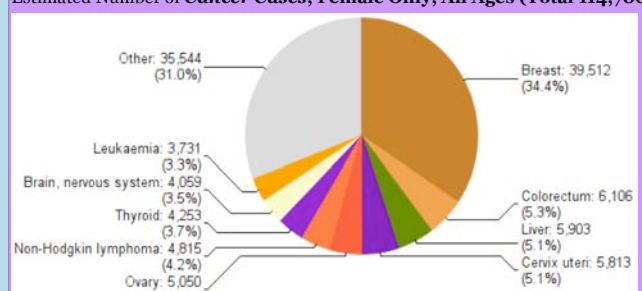


Estimated Number of **Cancer Deaths**, Female Only: All Ages (Total 31,237)

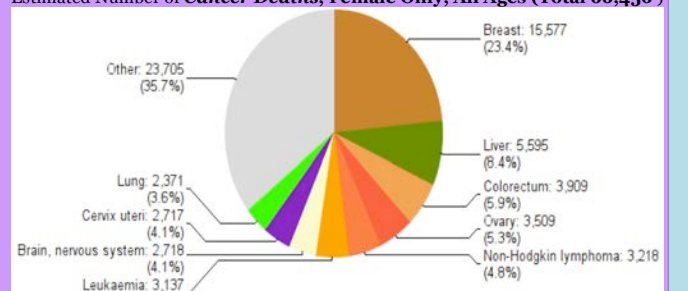


Figures 7a & 7b: Northern Africa

Estimated Number of **Cancer Cases**, Female Only: All Ages (Total 114,786)



Estimated Number of **Cancer Deaths**, Female Only: All Ages (Total 66,456)



Cervical Cancer in Africa At a Glance (By Country)

Figure 8a: Cervical Cancer By Absolute Numbers: 20 Highest in Africa

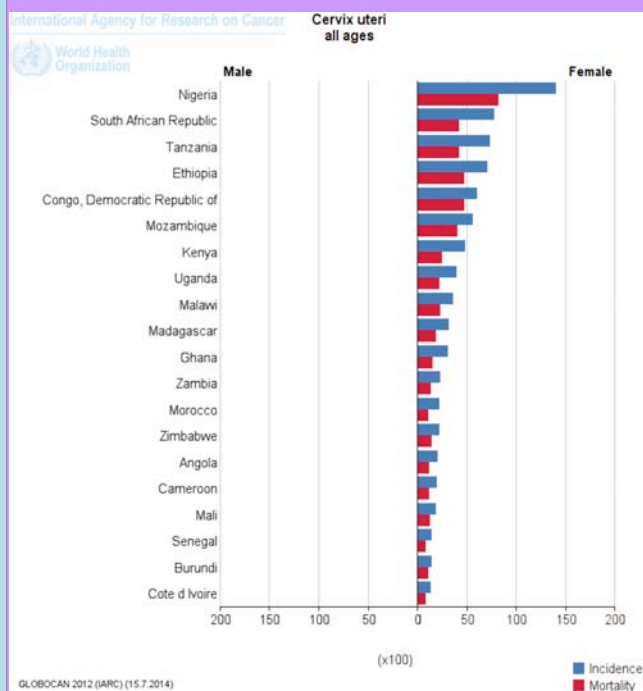
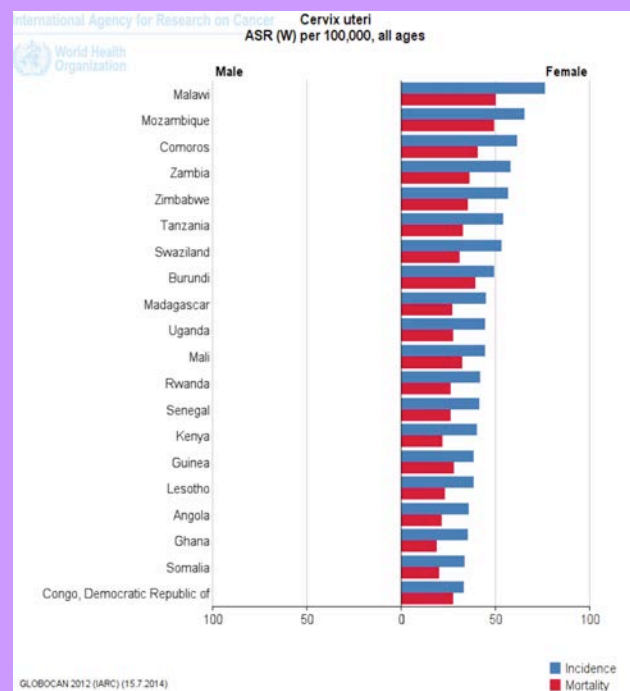


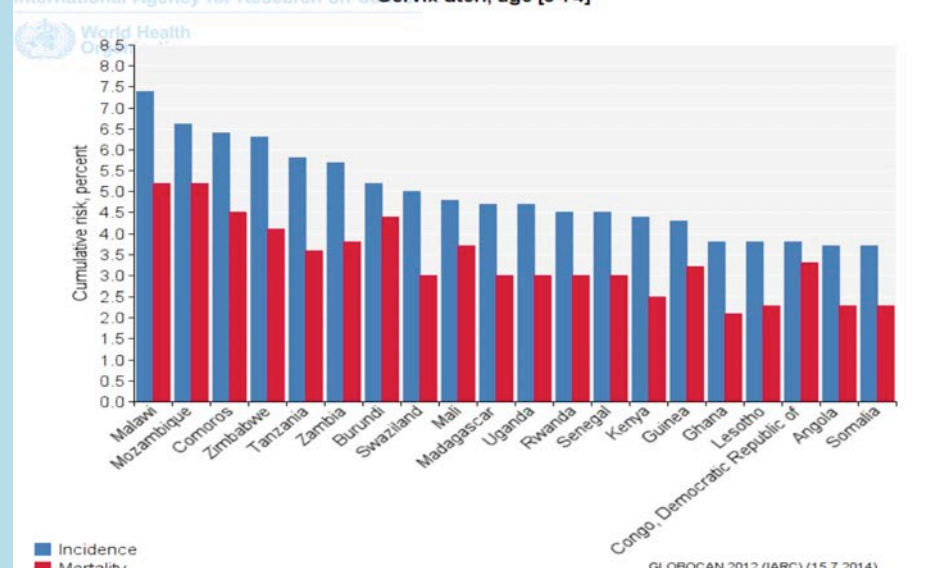
Figure 8b: Cervical Cancer By *Age Standardised Rate (ASR): 20 Highest in Africa



*ASR (Age-Standardised Rate)

An age-standardised rate (Figure 1 & 8b; 9a to 9f; 10 a & 10b.) is a summary measure of the rate that a population would have if it had a standard age structure. Standardization is necessary when comparing several populations that differ with respect to age because age has a powerful influence on the risk of cancer. ASR is a weighted mean of the age-specific rates; the weights are taken from population distribution of the *standard population*. The most frequently used standard population is the *World Standard Population*. The calculated incidence or mortality rate is described as age-standardised incidence or mortality rate (world).

Figure 8c: Cervical Cancer By Cumulative Risk: 20 Highest in Africa



Cumulative Risk

Cumulative incidence/mortality (Figure 8c) is the probability or risk of individuals getting/dying from the disease during a specified period. For cancer, it is expressed as the number of new born children (out of 100) who would be expected to develop/die from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

Cost: (contd from front page).

The same HPV vaccines available for as low as US\$ 4.50 per dose in developing countries can cost over \$100 in more developed countries and the previous lowest public sector price was \$13 per dose.

For HPV demonstration programmes, the GAVI Alliance will cover the full cost of HPV vaccines. However, countries introducing HPV vaccine nationally are required to meet the standard co-financing commitment.

Economic Impact & Burden Compared to Cost of Vaccination:

The direct economic burden of cervical cancer treatment is only one aspect of full socioeconomic impact of this disease. In most developed countries, the bulk of direct medical costs of cervical cancer treatment is covered by health systems.

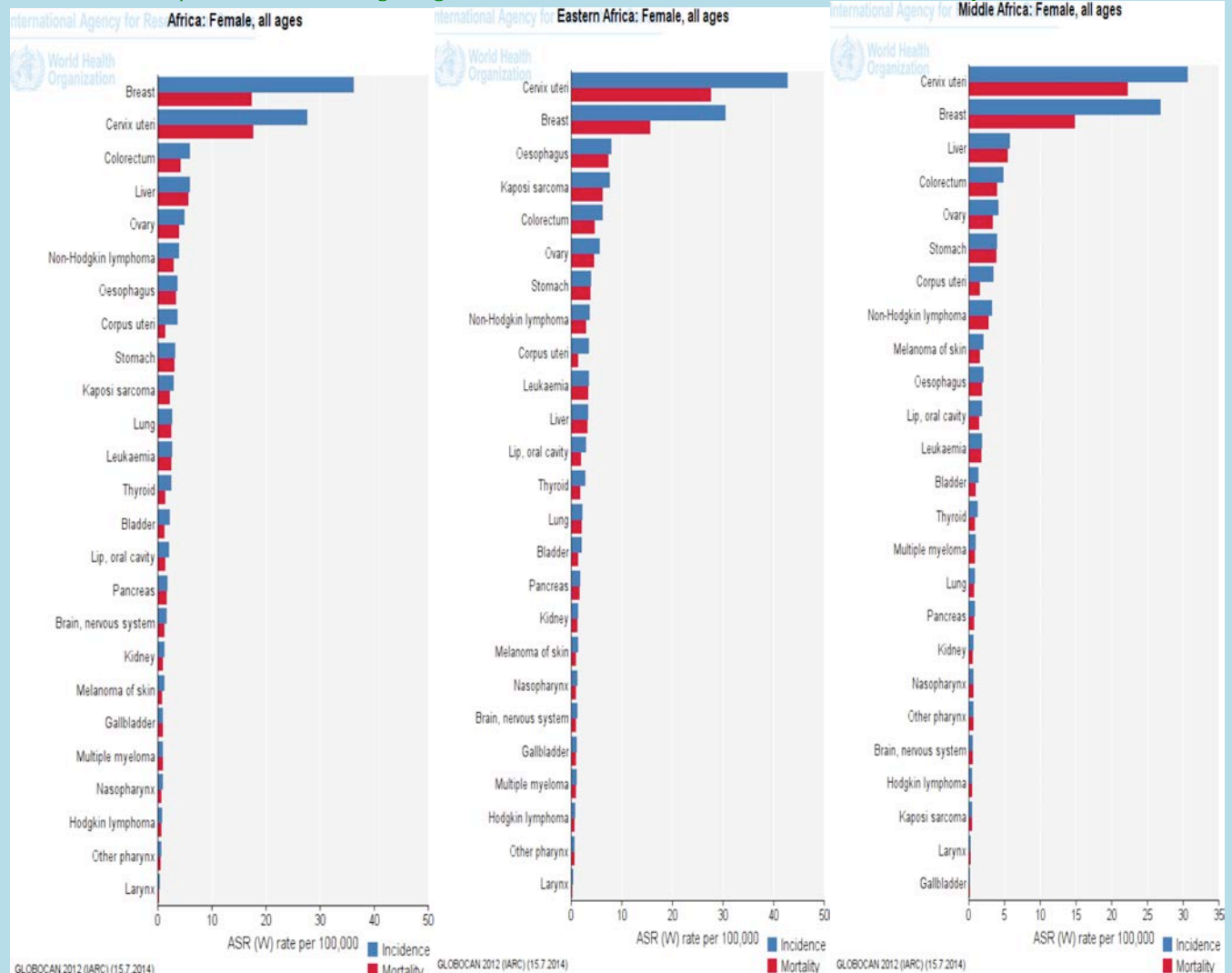
In developing countries, patients and their families bear substantial burden's associated with out-of-pocket payments, and other related expenditure.

For example, a study from Nigeria (where monthly minimum wage is US\$112) reported patients referred to radiotherapy had to pay US\$221 for an initial visit, preliminary investigations and treatments, and additional US\$516 for treatment at a radiotherapy center (including transportation). Given such costs, 81% of patients referred to radiotherapy had to forego this treatment option (*Obi SN, Ozumba BC. Cervical cancer: socioeconomic implications of management in a developing nation*).

Cervical Cancer: Africa At a Glance (By Continent / Sub Region)

Figures 9a, 9b & 9c:

Eastern and Middle/Central Africa have higher Age Standardised Rates of Cervical Cancer Incidence & Mortality than the rest of Africa.



Figures 9d, 9e & 9f:

In North Africa Age Cervical Cancer Incidence & Mortality (Age Standardised Rate) is 4th ranked cancer for women, & 2nd in Southern & Western Africa

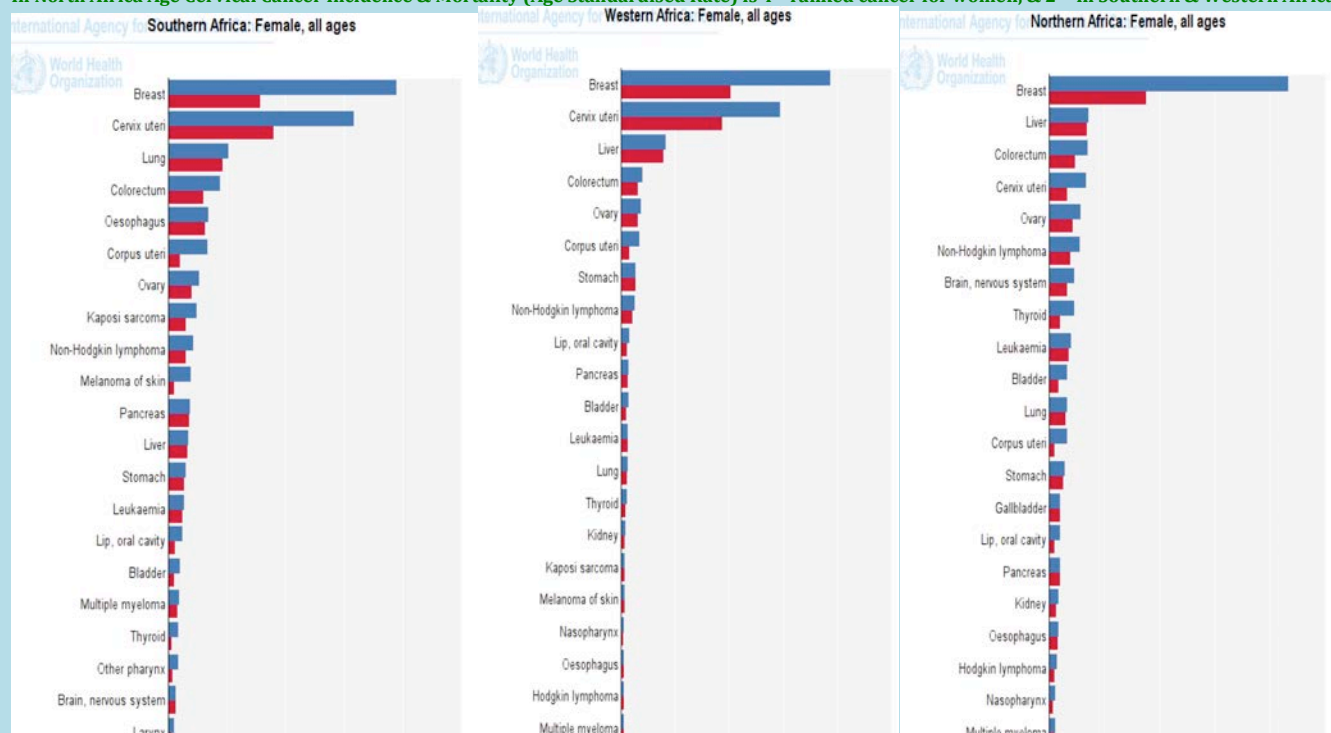
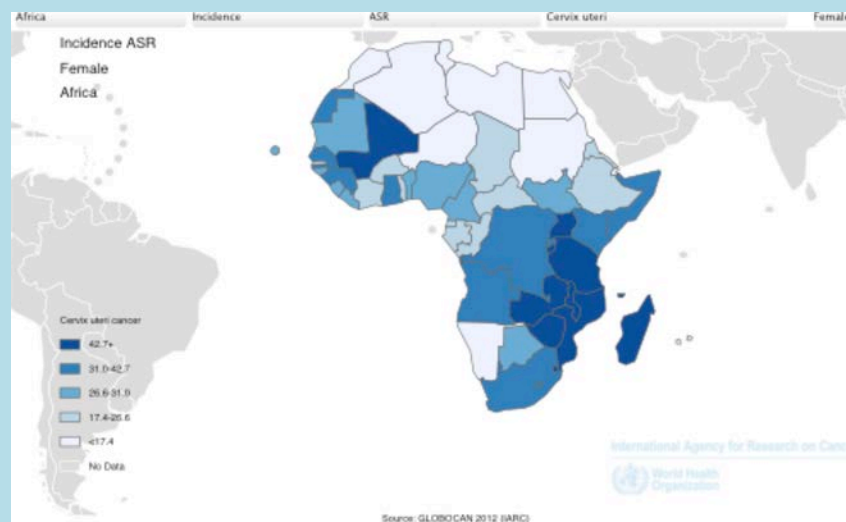


Figure 10a. Africa Map: Cervical Cancer Incidence Age Standardised Rate (ASR)



Given the high socio economic cost, currently weak health systems and mortality in Africa - Immunisation coupled with screening and treatment, is the best strategy to rapidly reduce the burden of cervical cancer. However, in resource-poor countries where women often lack access to cancer screening and treatment services, immunising girls before exposure to HPV, is critical.

Two human papillomavirus (HPV) vaccines have been licensed in over 100 countries many of which are GAVI-eligible. Both have been prequalified by WHO for purchase by UN agencies. Both vaccines require three doses given over six months.

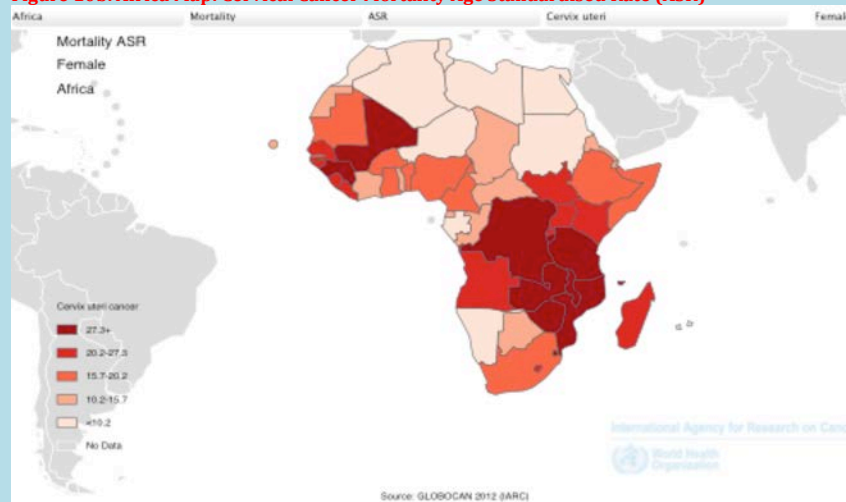
The vaccines have been proven to remain effective for at least five years when three vaccine doses are given, but the protective period is likely to increase as further data are analysed.

Research is ongoing to determine if fewer doses will provide adequate levels of protection.

Global & African Health Goals & Frameworks:

Protecting women against cervical cancer supports: the UN Secretary-General's Global Strategy on Women's and Children's Health; the ICPD Program of Action; MDGs 5a & 5b / the Post 2015 Development Goals; the AUC led Campaign for Accelerated Reduction of Maternal & Child Mortality (CARMMMA) & Africa 2063 Development Goals - through addressing key global health priorities by increasing access to life-saving vaccines.

Figure 10b. Africa Map: Cervical Cancer Mortality Age Standardised Rate (ASR)



Demographic Patterns, Future Perspectives, & Risk Factors

HIV and AIDS:

- Many countries that have high rates of cervical cancer mortality and morbidity are also burdened with high rates of HIV. Recent findings show that HPV infection doubles the risk of acquiring HIV in women.
- Importantly, HIV significantly increases the risk of persistent HPV infections, which can lead to cervical cancer. Additionally, the development of cervical cancer is much faster in HIV-positive women. Women infected with both HIV and HPV are also more likely to develop cervical cancer.
- The top 20 countries in Africa variously with the highest Age Standardised Rate, Cumulative Risk, and highest absolute numbers of cervical cancer, also include between 12 and 13 of the countries with the highest numbers of women living with HIV of between 100,000 and 3.4m.
- Given that overall there are over 23 million people living with HIV in Africa approximately half of whom are girls and women (out of a global total of a global total of 34 million), urgent preventive action is crucial to avoid an out of control epidemic of cervical cancer in the coming decades. This includes universal access to SRHR information, services and commodities.

High Fertility Rates / Adolescent Pregnancies, Family Planning & Maternal Health:

- The WHO recommends that girls start receiving the HPV vaccine between the ages of 9 and 13 years to ensure immunization before sexual exposure. For girl children or adolescent girls forced into under age 'marriages' the benefits of the HPV vaccine are reduced or nullified.
- Additionally girls forced into under age 'marriage' fall into another high risk category - of higher number of live childbirths / high fertility rate - as they become pregnant earlier, and have more children at a younger age - if they survive pregnancy related mortality. Even for older women, high number of live childbirths/high fertility rate increases risk of cervical cancer.
- Delaying commencement of sexual activity and avoiding early and repeated birth are therefore strong consideration's in the fight against cervical cancer – options which are hardly open to girl 'brides', vulnerable to intimidation and sexual violence.
- The top 20 countries in Africa variously with the highest Age Standardised Rate, Cumulative Risk, and highest absolute numbers of cervical cancer, also include between 11 and 12 of the countries with the highest child 'marriage' (between 35% and 63% of girls forced into under age 'marriage'; or countries with a total fertility rate of between 4.3 and 6.3).
- As Africa's population is predicted to double from current 1 billion to about 2 billion by 2050, with the youngest global population, demography is very likely to have an impact on cervical cancer.

Main sources for study summarized in integrated factsheet and scorecard:

1. Africa, Health, Human & Social Development Information Service (Afri-Dev.Info)
2. Alliance for Cervical Cancer Prevention
3. American Cancer Society
4. Cancer Research UK Stats and Facts 2014
5. Cervical cancer: Socioeconomic implications of management in a developing nation. (Obi SN, Ozumba BC, J Obstet Gynaecol 2008)
6. GAVI Alliance
7. Global Cancer Facts & Figures 2nd Edition
8. GLOBOCAN 2012: International Agency for Research on Cancer (IARC)
9. ICO Information Centre on Human Papilloma Virus and Cervical Cancer
10. MSD
11. The Cervical Cancer Action coalition
12. UNAIDS
13. UNICEF
14. United Nations Population Fund (UNFPA)
15. World Health Organization (WHO)

To find out more about publications please contact email: [publications\[at\]afri-dev.info](mailto:publications[at]afri-dev.info)
For partnerships, support or general information please contact email : [contactus\[at\]afri-dev.info](mailto:contactus[at]afri-dev.info)
Africa Office: 14 Akintan St. Ogba, Lagos , Nigeria +23417601902,
Intl. Office: 175 Grays Inn Rd, London WC1X 8UE, UK