



# Cervical Cancer

PREVENTION & CONTROL  
A CARIBBEAN PERSPECTIVE



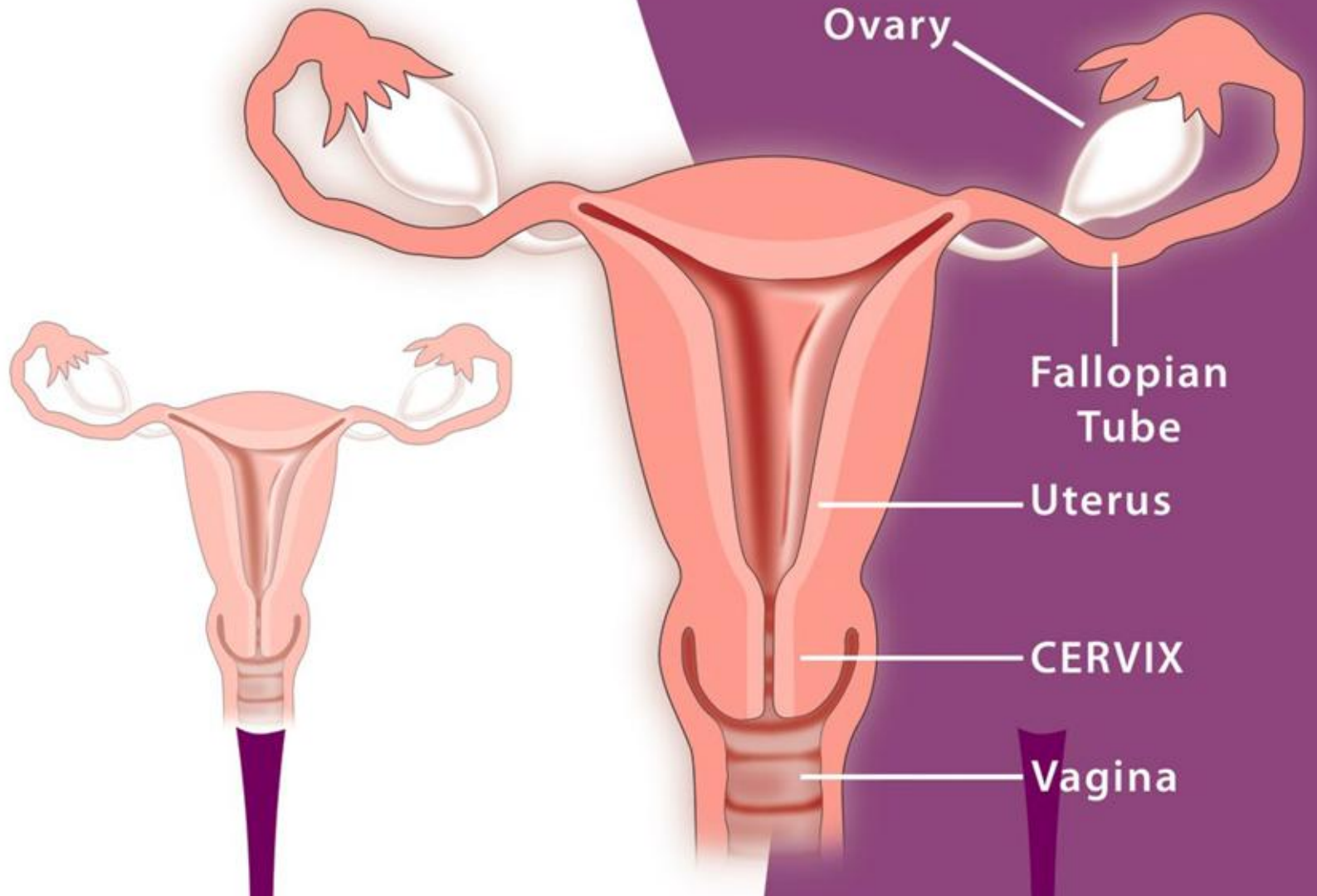
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***MBBS, DM (OBGYN), FACOG, F.MAS, FICS***  
***Obstetrician, Gynaecologist, Gynae-Oncologist, Minimal Access Surgeon.***  
***Director – Barbados Cancer Society***

# Crystal Clear Waters





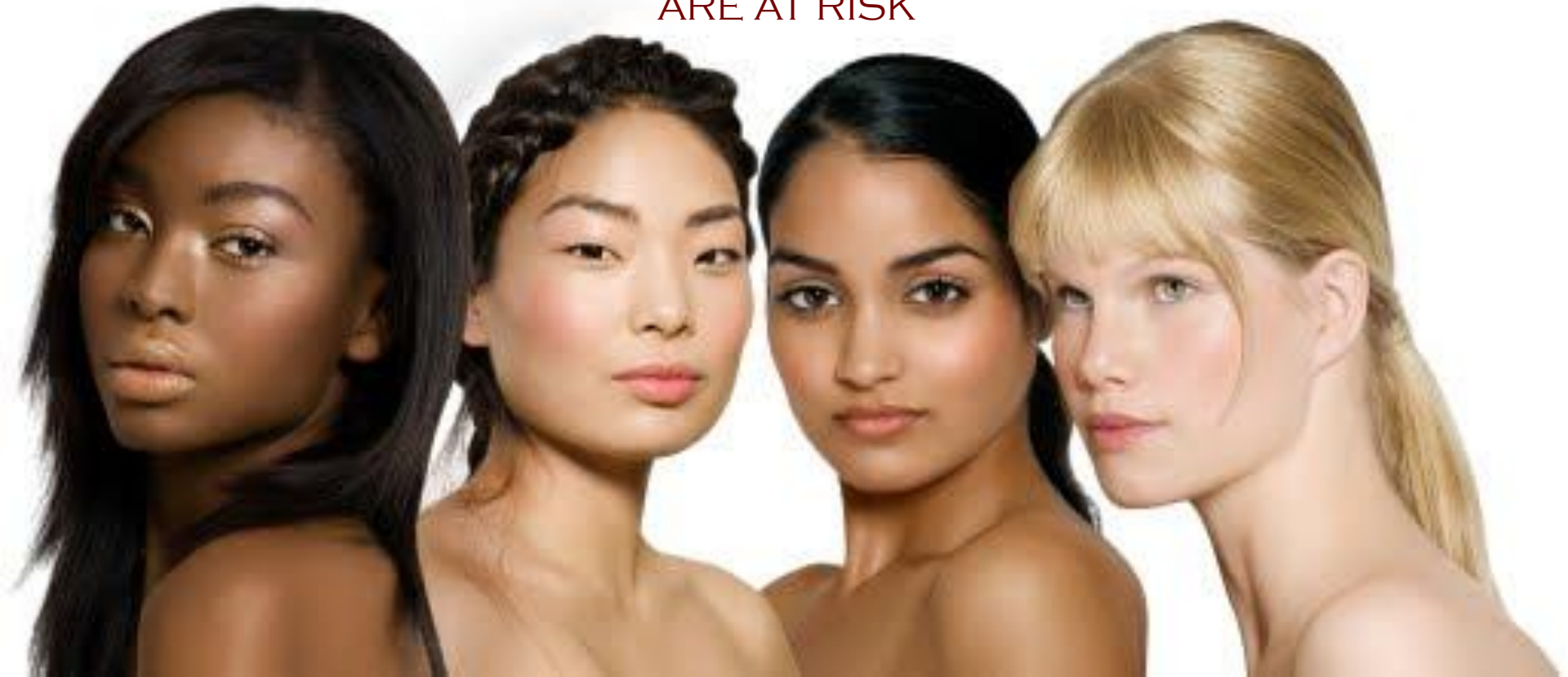
# FEMALE REPRODUCTIVE SYSTEM



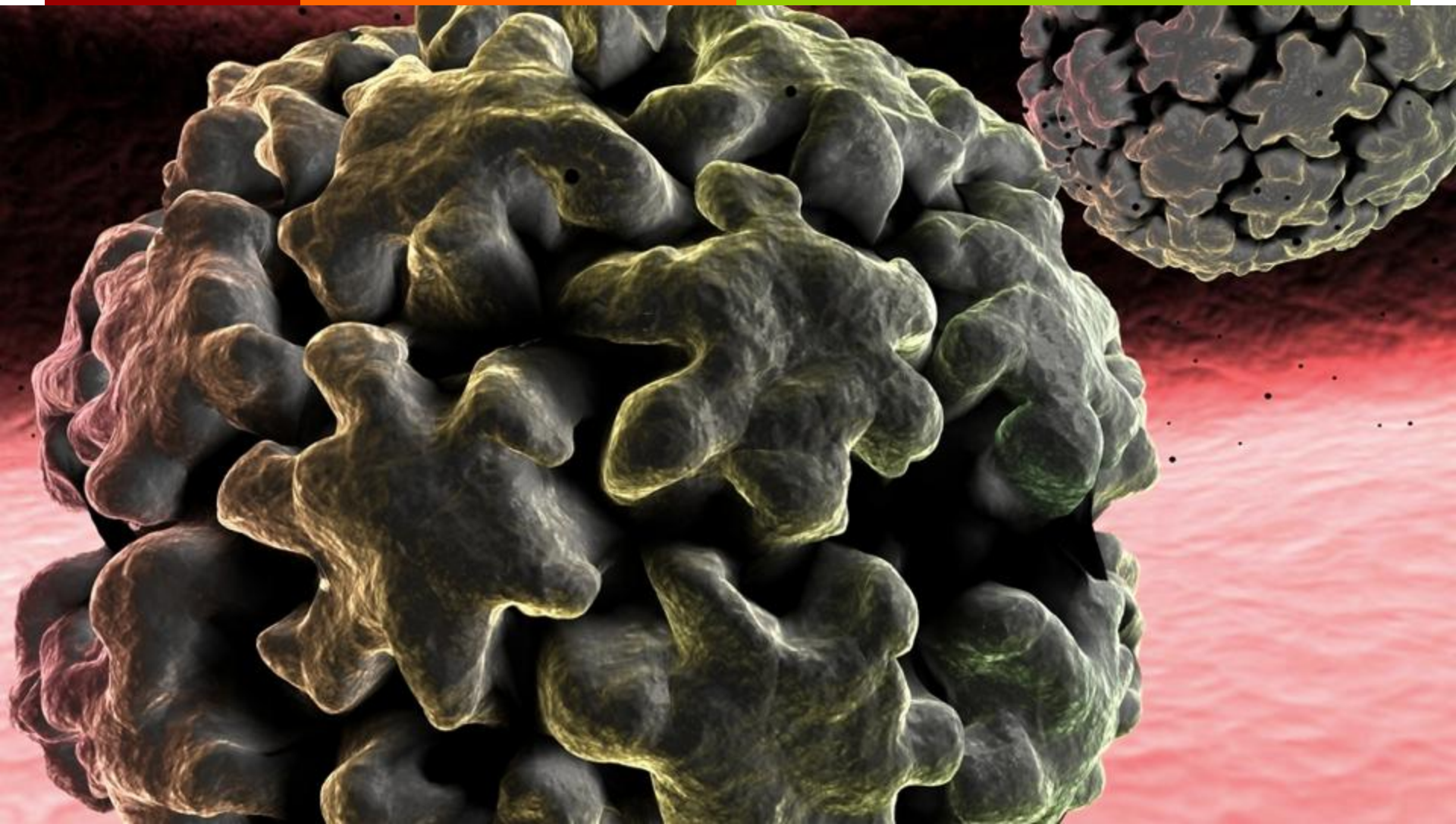
Who gets Cervical Cancer?

**ALL WOMEN**

ARE AT RISK



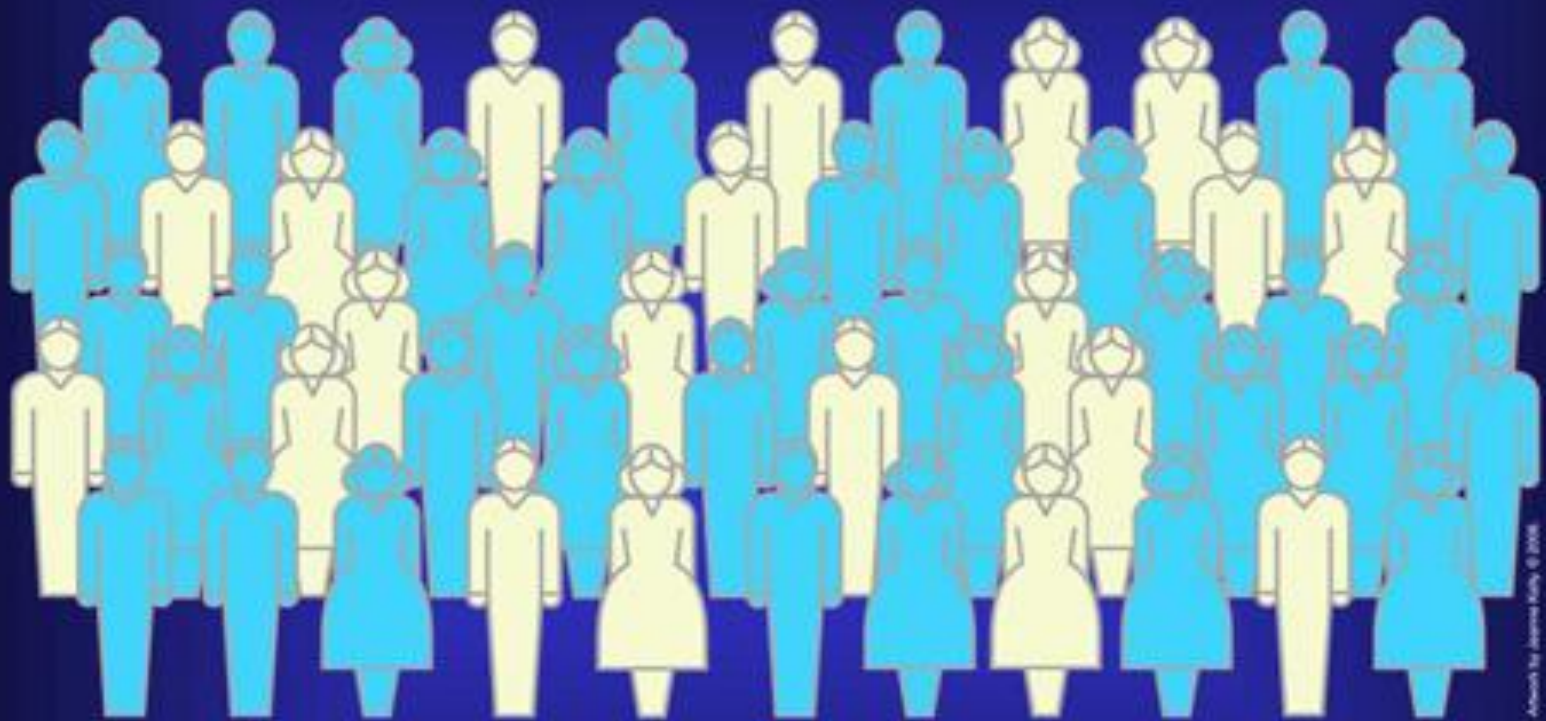
# Human Papillomavirus (HPV)





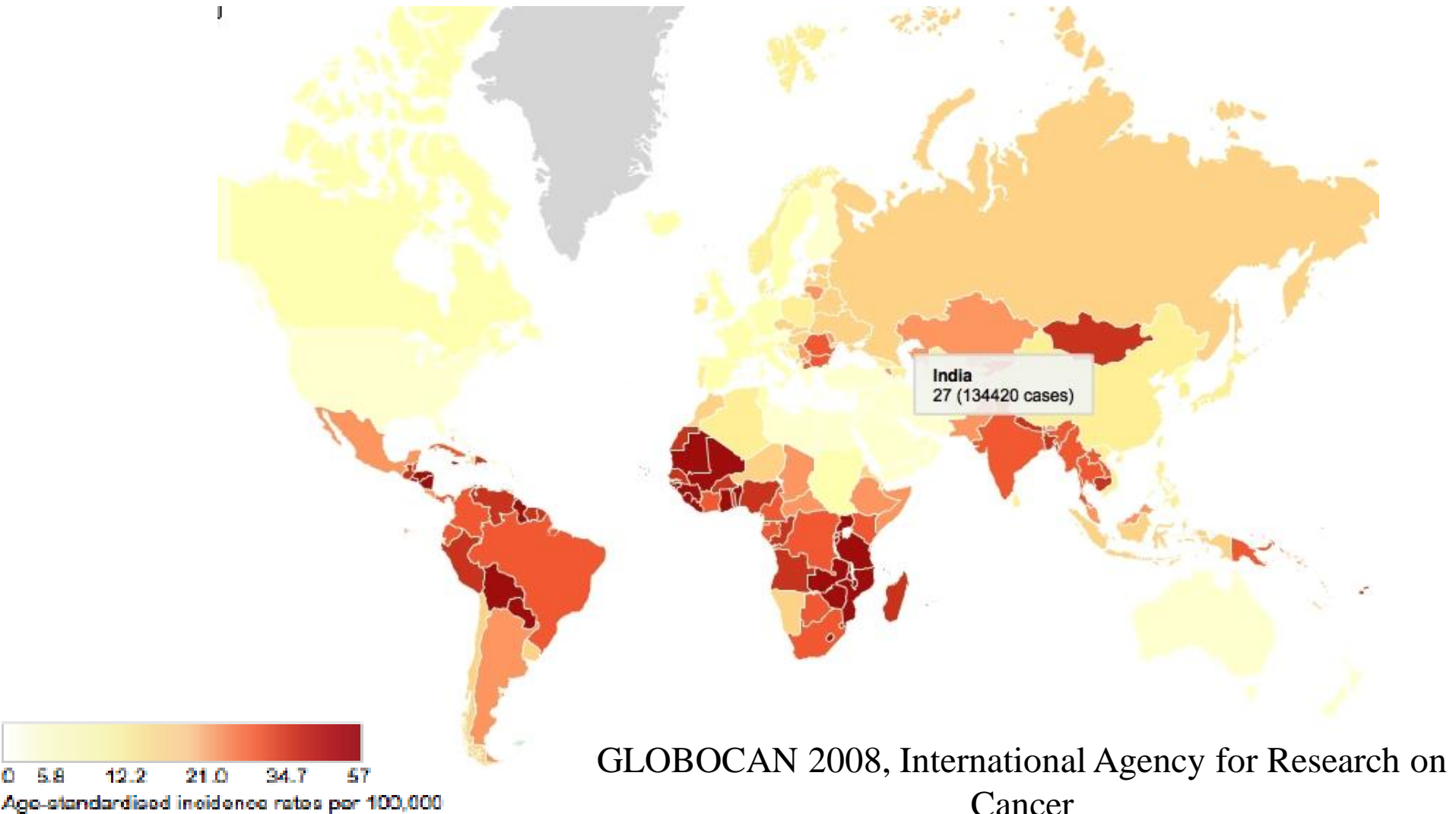
# HPV

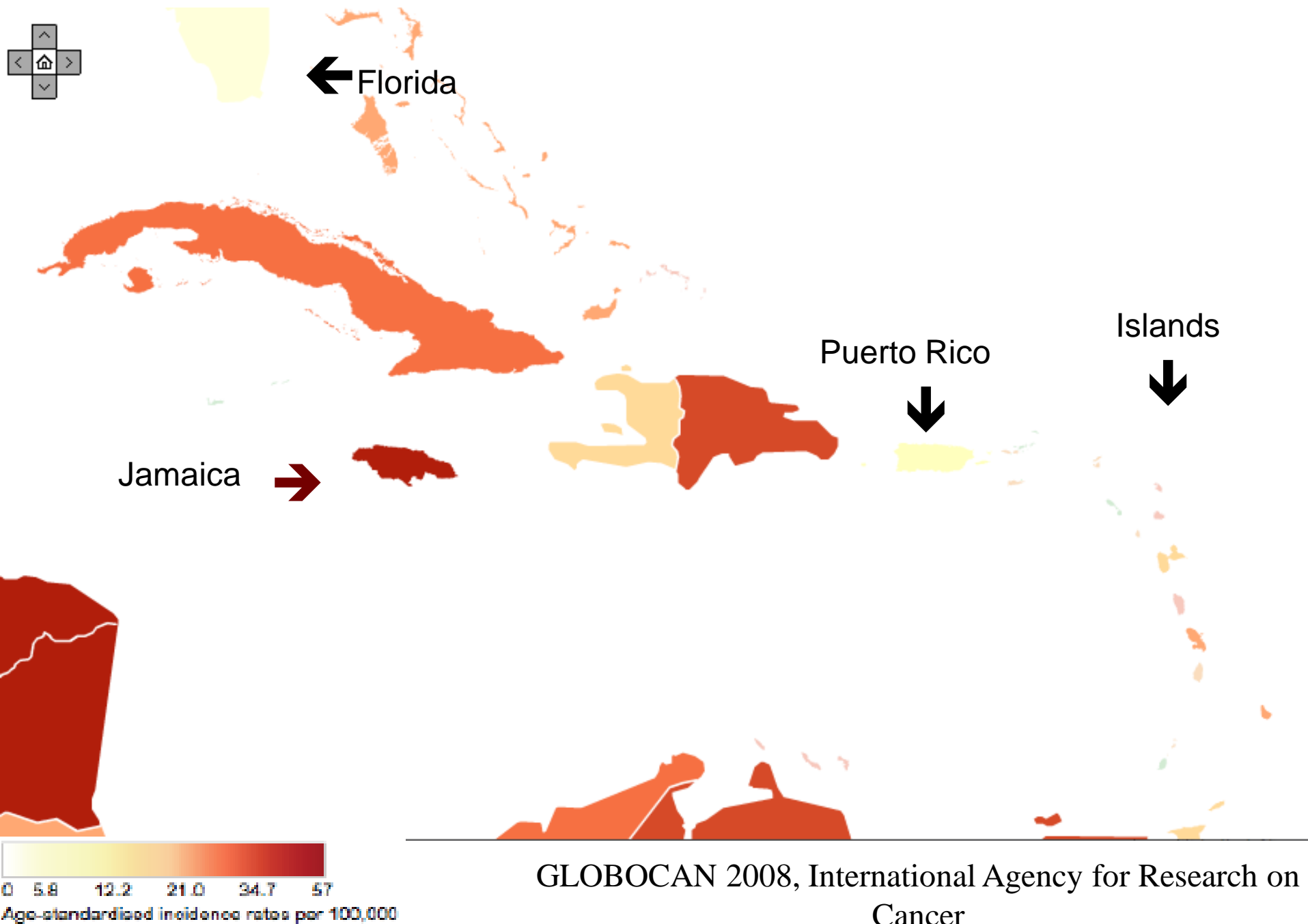
## Common Infection



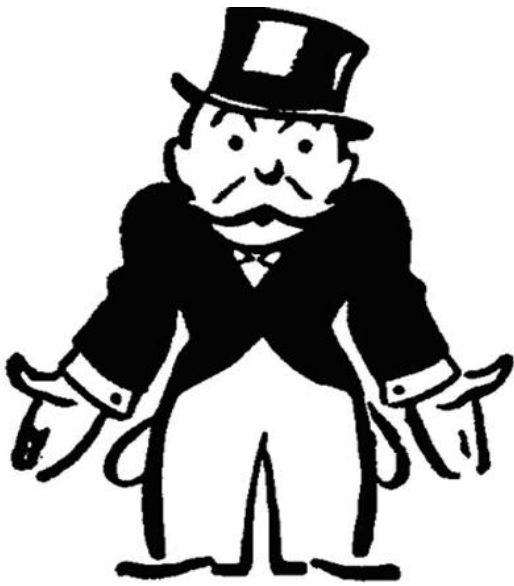
■ Infected with HPV

# More Common In Developing Countries









# Poor Policy

Because of poor access to screening and treatment services, the vast majority of deaths occur in women living in low- and middle-income countries.

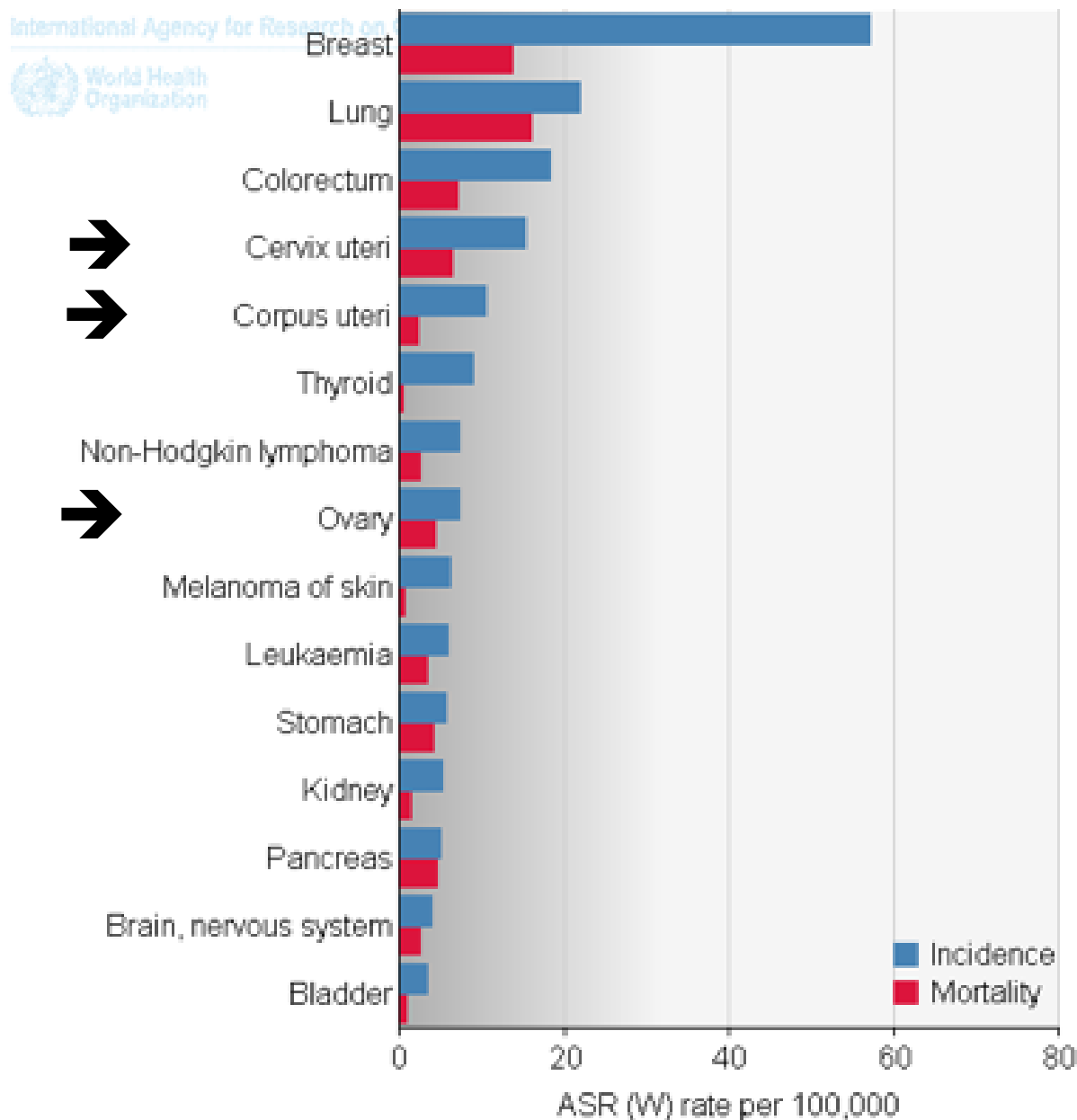
# IT COSTS

**POOR ECONOMICS**

# BE POOR

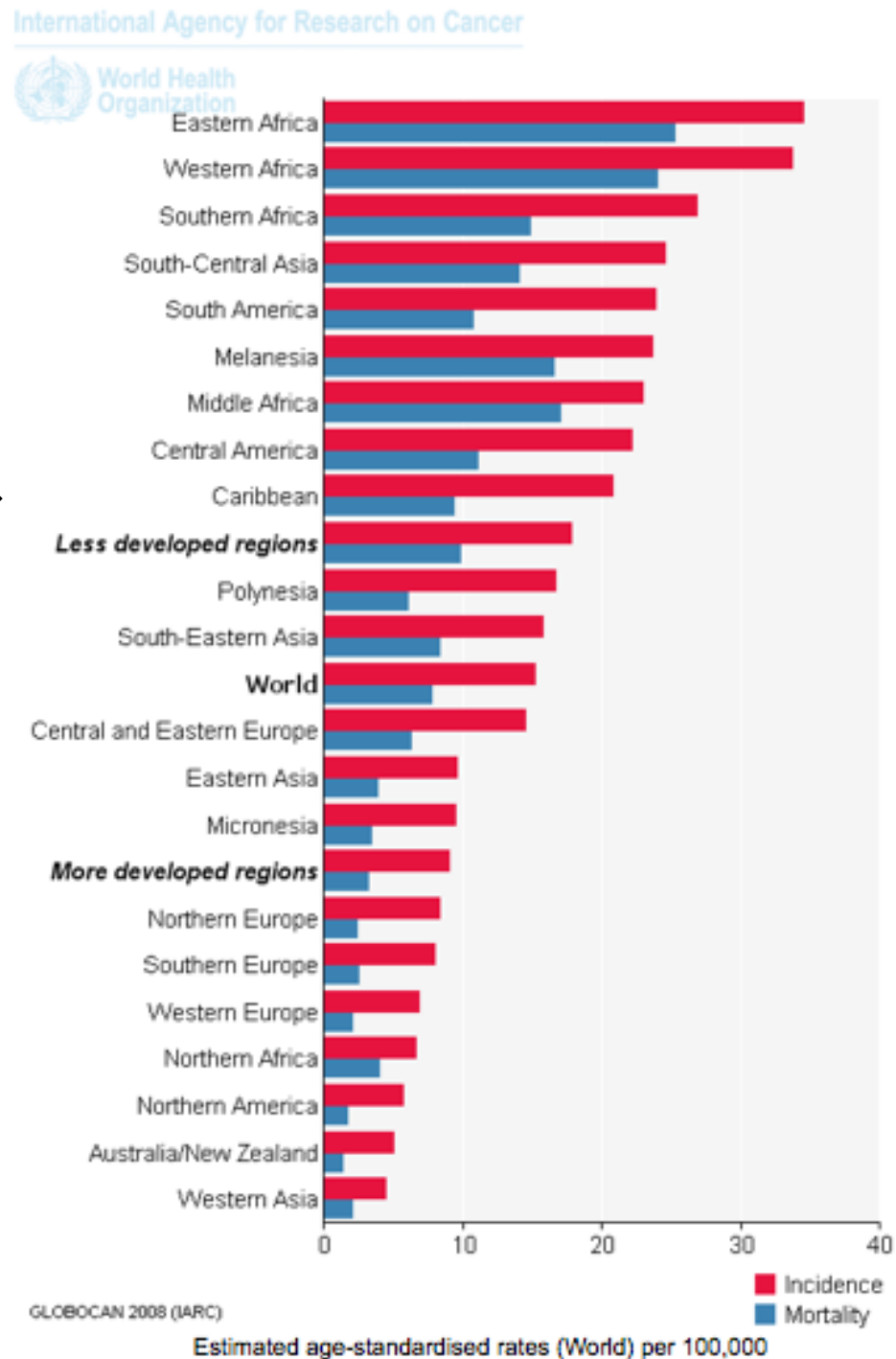
# Gynaecological Cancers

Estimated age-standardised incidence and mortality rates: women





# Cervical Cancer Incidence



# PREVENTION



# The 3 Levels of Prevention

## PRIMARY PREVENTION

### Girls 9-13 years

- HPV vaccination

### Girls and boys, as appropriate

- Health information and warnings about tobacco use\*
- Sexuality education tailored to age & culture
- Condom promotion/provision for those engaged in sexual activity
- Male circumcision

## SECONDARY PREVENTION

### Women >30 years of age

#### Screening and treatment as needed

- “Screen and treat” with low cost technology VIA followed by cryotherapy
- HPV testing for high risk HPV types (e.g. types 16, 18 and others)

## TERTIARY PREVENTION

### All women as needed

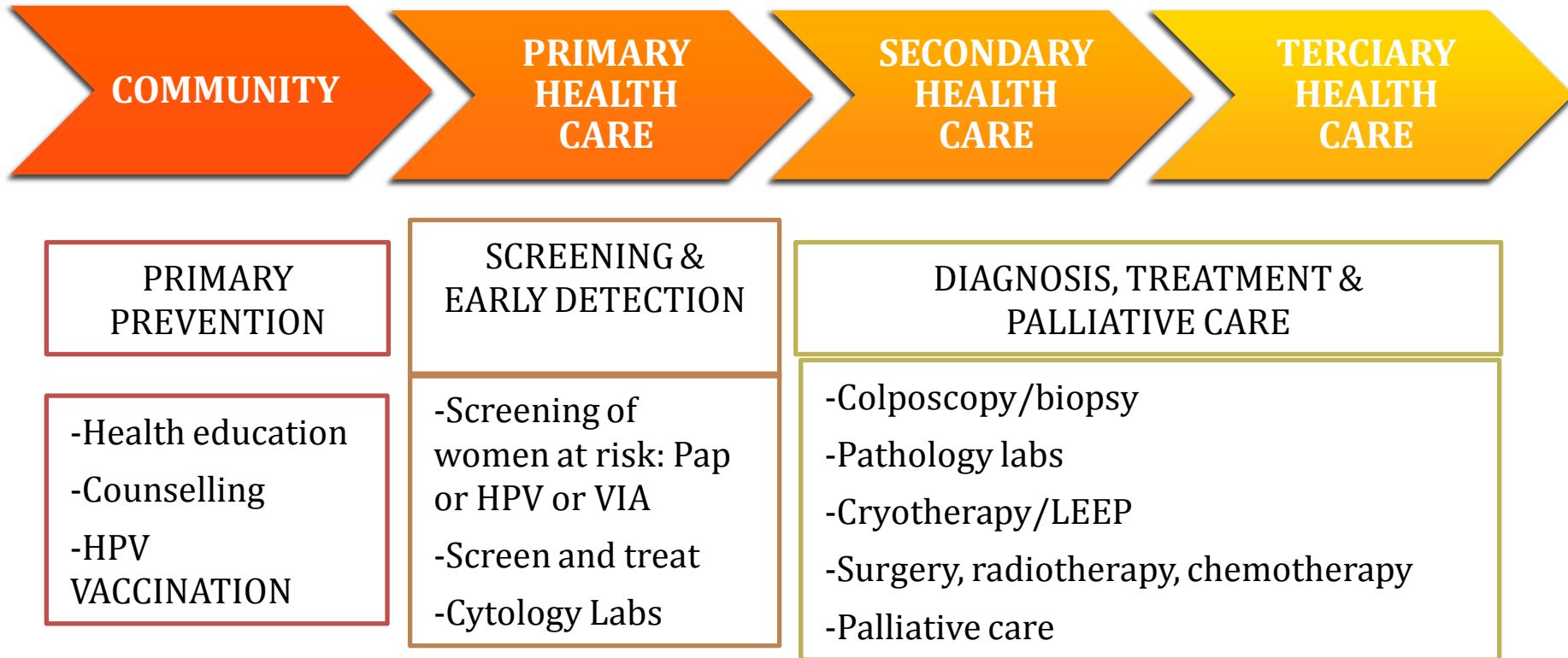
#### Treatment of invasive cancer at any age

- Ablative surgery
- Radiotherapy
- Chemotherapy

\* Tobacco use is an additional risk factor for cervical cancer.



# COMPREHENSIVE CERVICAL CANCER PROGRAMS



© Dr Tomo Kanda  
Advisor on Chronic Diseases & Mental Health  
PAHO Office for Barbados and Eastern Caribbean Countries

## PRIMARY PREVENTION

### Girls 9-13 years

- HPV vaccination

### Girls and boys, as appropriate

- Health information and warnings about tobacco use\*
- Sexuality education tailored to age & culture
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# PRIMARY PREVENTION



\* Tobacco use is an additional risk factor for cervical cancer.



## HPV Vaccines



# Social Conservatives





# It Doesn't have to Be Like This



## SECONDARY PREVENTION

### Women >30 years of age

Screening and treatment as needed

- “Screen and treat” with low cost technology VIA followed by cryotherapy
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# SECONDARY PREVENTION

## Screening & Early Detection

1

**CYTOLOGY**

2

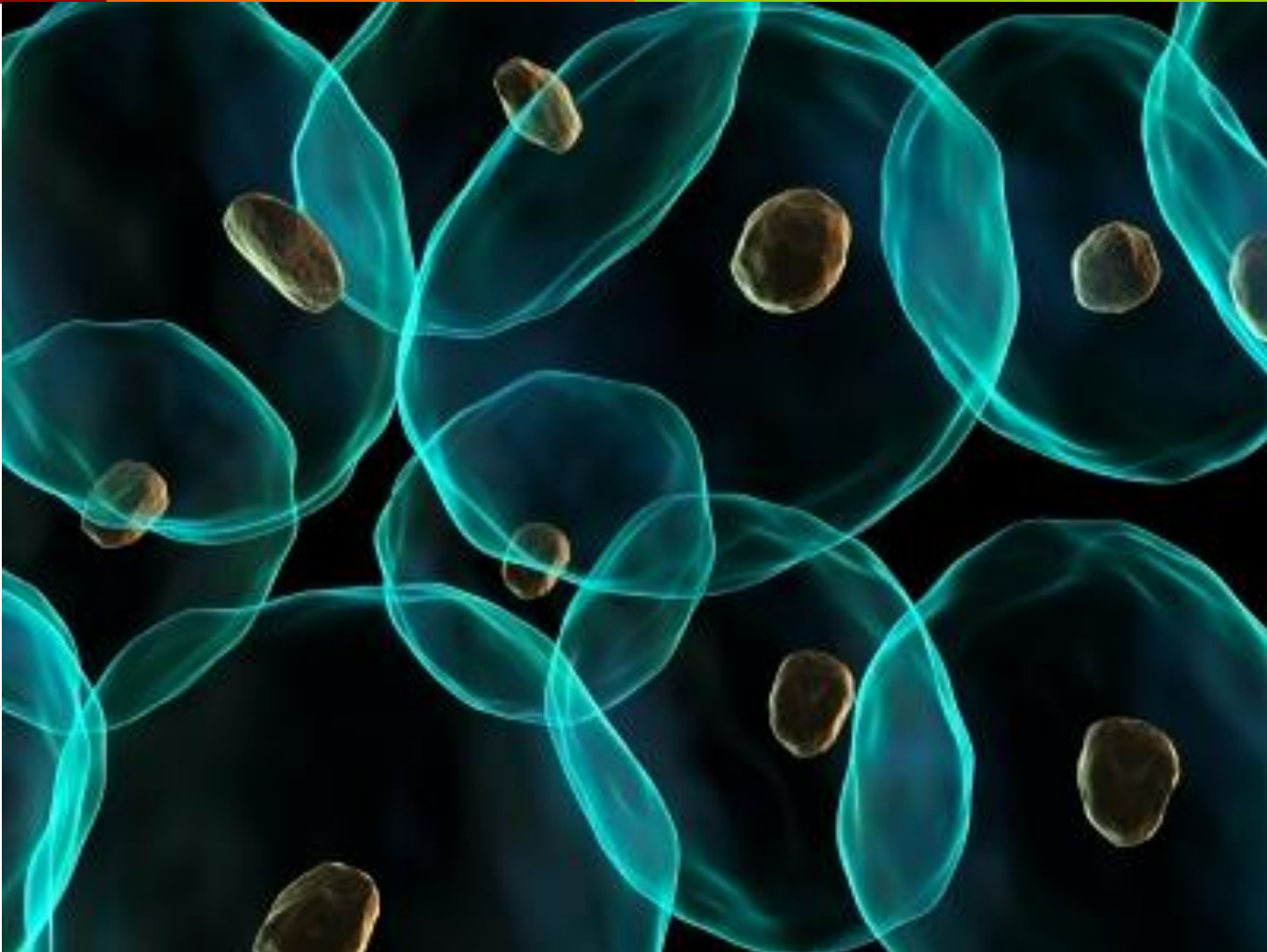
**VIA**

3

**HPV DNA  
Testing**

1

# CYTOLOGY – The Study Of Cells

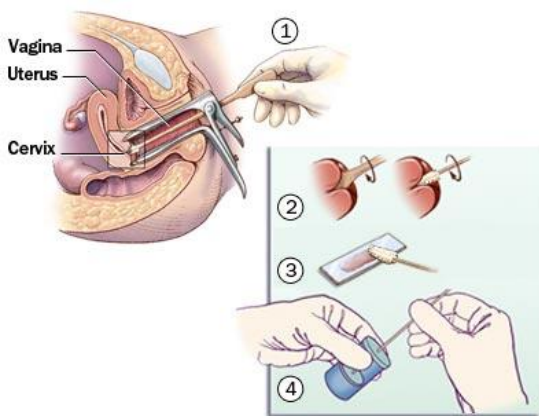


1

# George Papanicolaou



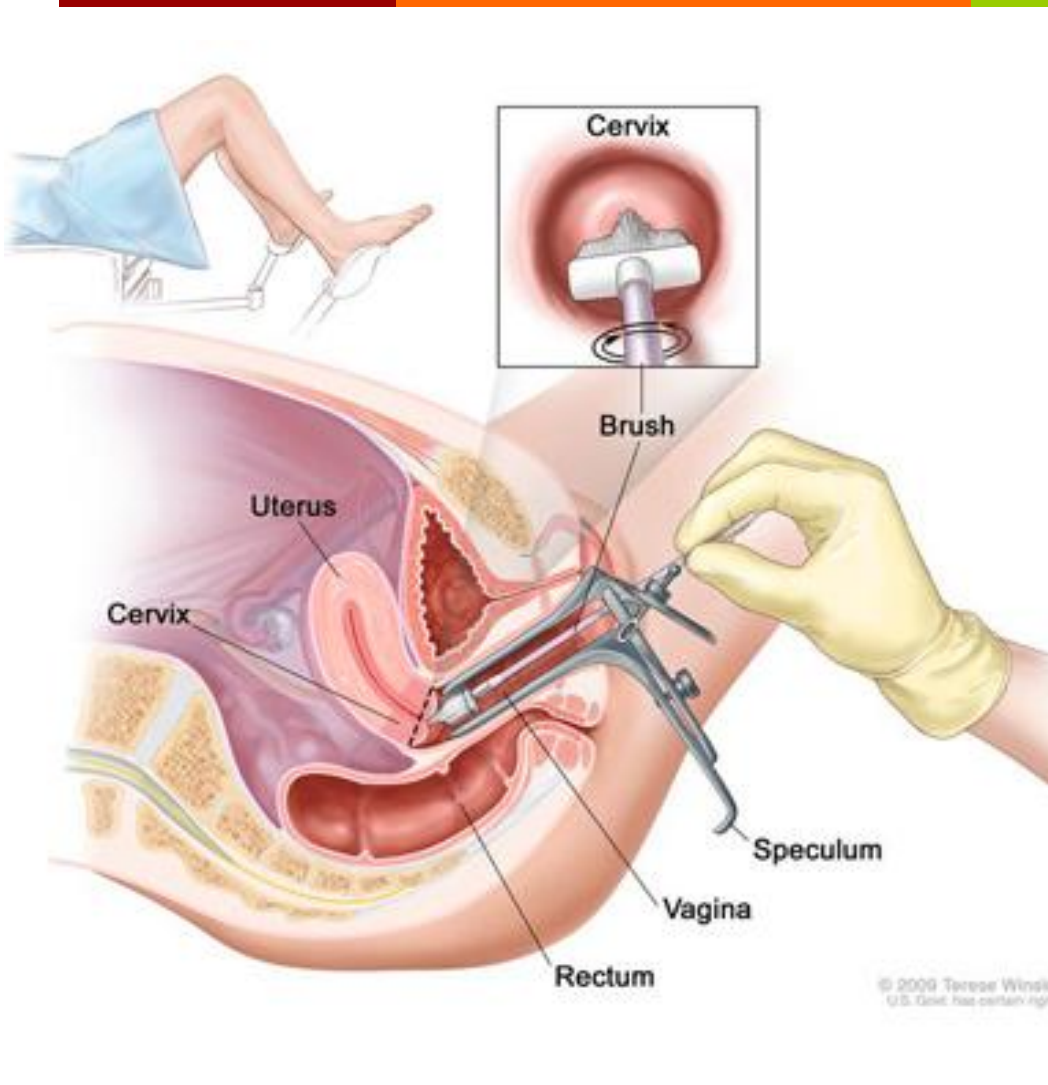




# What is a Pap Test?

- Cells are collected from the surface of your cervix by a doctor/nurse
- These cells are then checked under a microscope for any abnormalities
- If abnormal (or *precancerous*) cells are found, they can be treated **before** they turn into cancer
- Cervical cancer can be found in the early stages, when it is easier to treat

Cells are collected from the surface of your cervix by a doctor/nurse/health care provider



1

These cells are then checked under a microscope for any abnormalities



**CYTOLOGIST**

If abnormal (or *precancerous*) cells are found, they can be treated *before* they turn into cancer

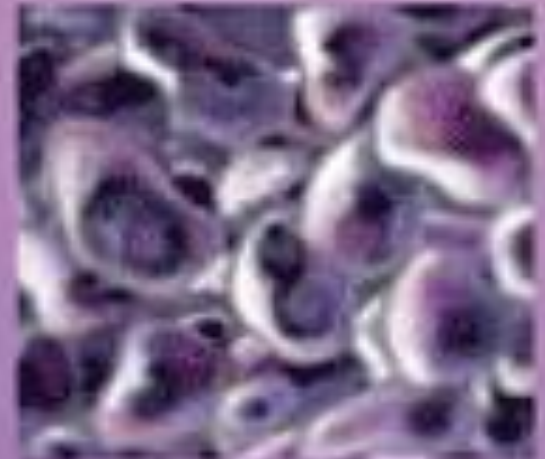
## HPV can cause changes in cervical cells over time



Normal  
cells



Pre-cancer  
cells

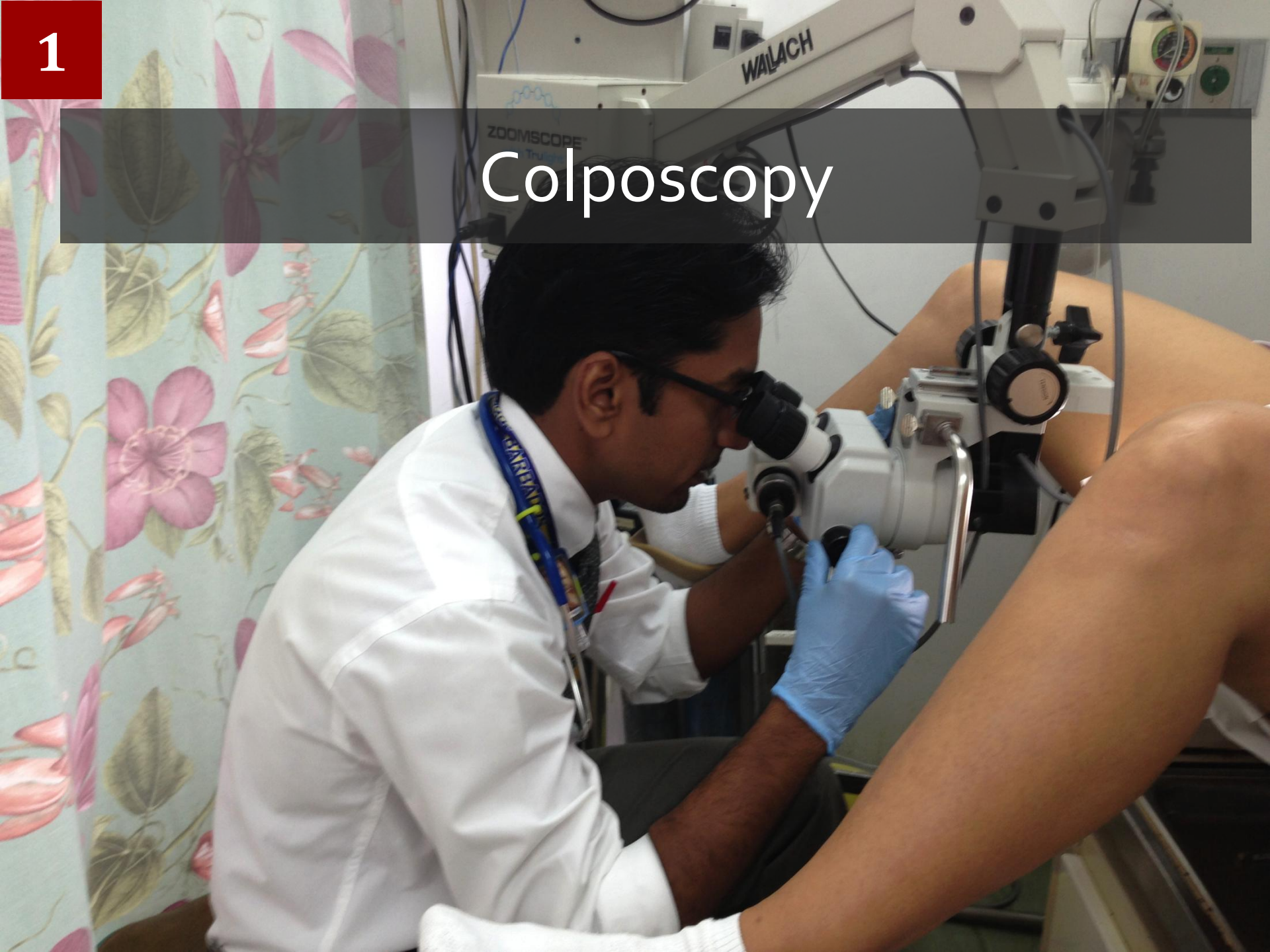


Cancer  
cells



1

# Colposcopy



Normal cervix



Normal cervical cells



Cervical dysplasia



Cancerous or pre-cancerous cervical cells



Cervical biopsy ("punch"):  
small tissue samples are taken  
from the cervix and examined  
for disease or other problems

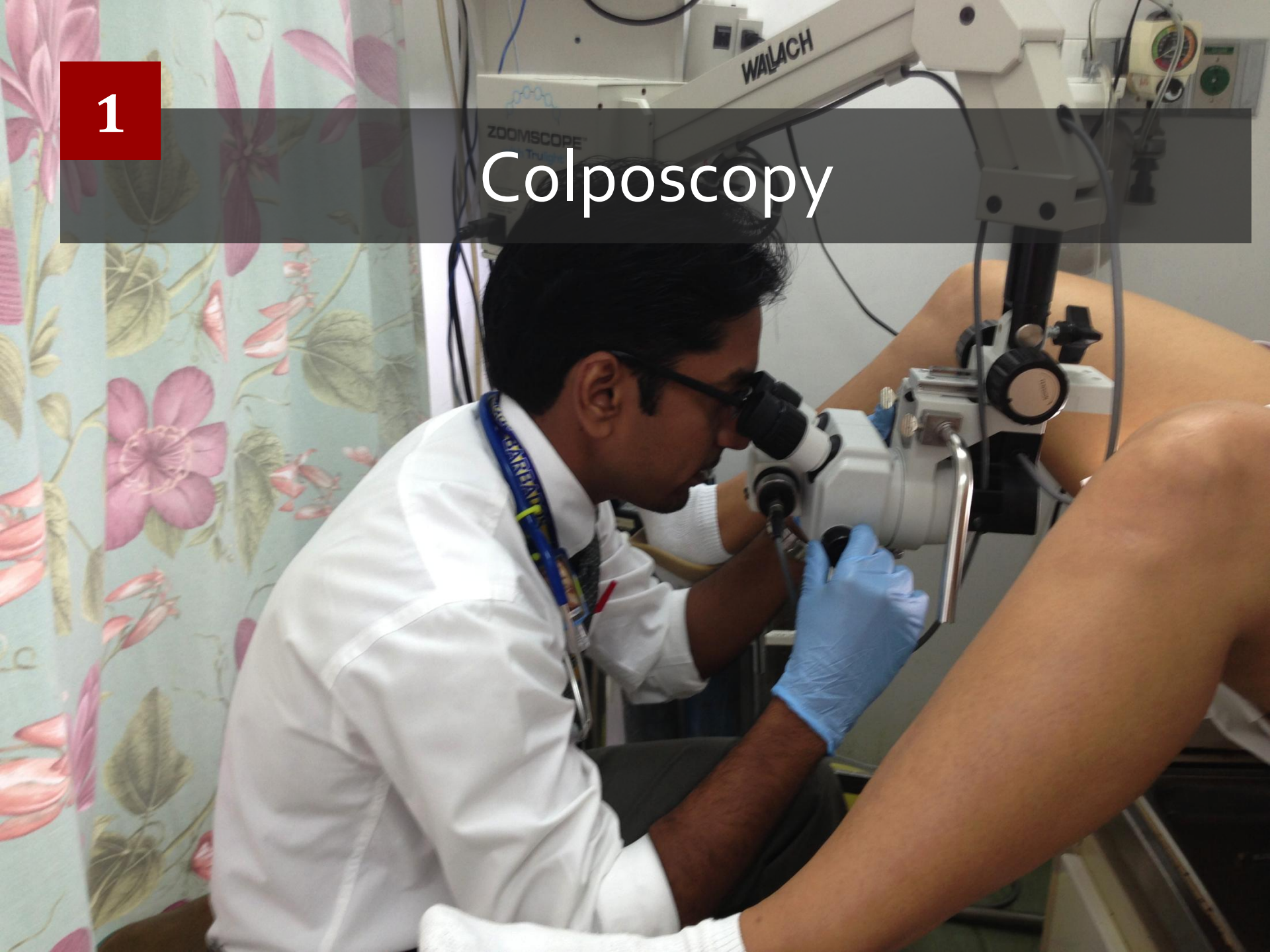


Cervix viewed  
through speculum  
with patient in  
lithotomy position



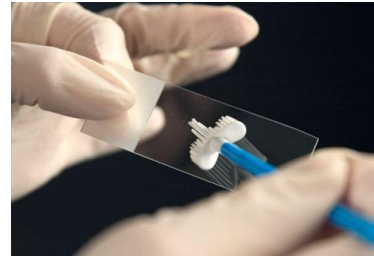
1

# Colposcopy



# Screening with Cytology (Pap)

**Test  
limitations**



**Equipment and personnel  
requirements**



**Multiple visits approach**





2

# VIA

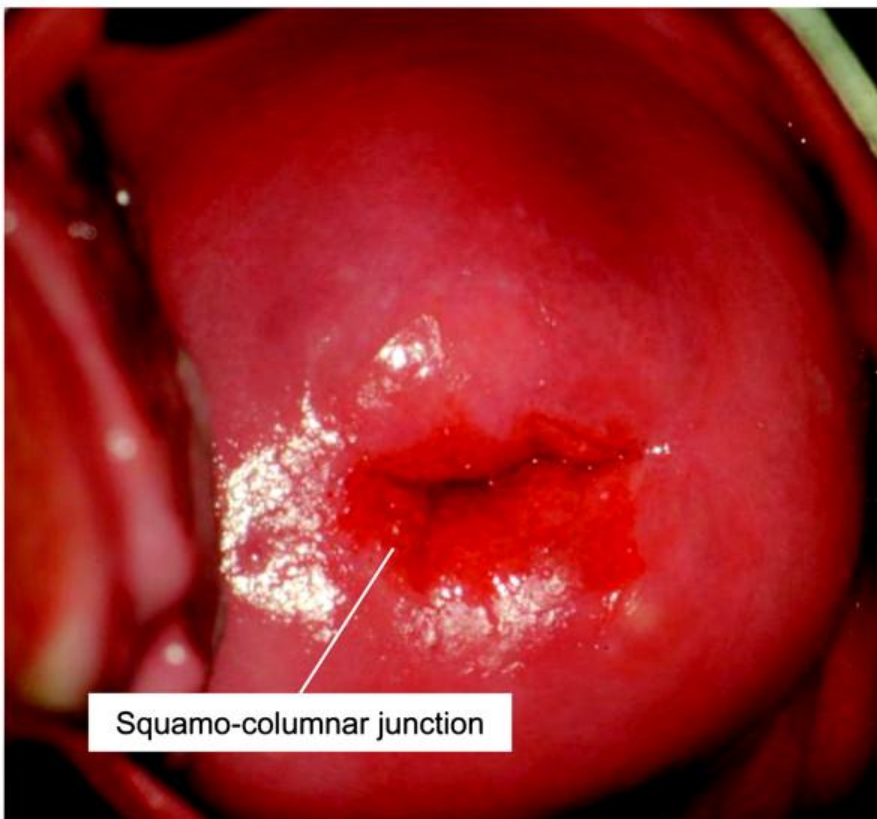
## Visual Inspection with Acetic Acid



# VIA

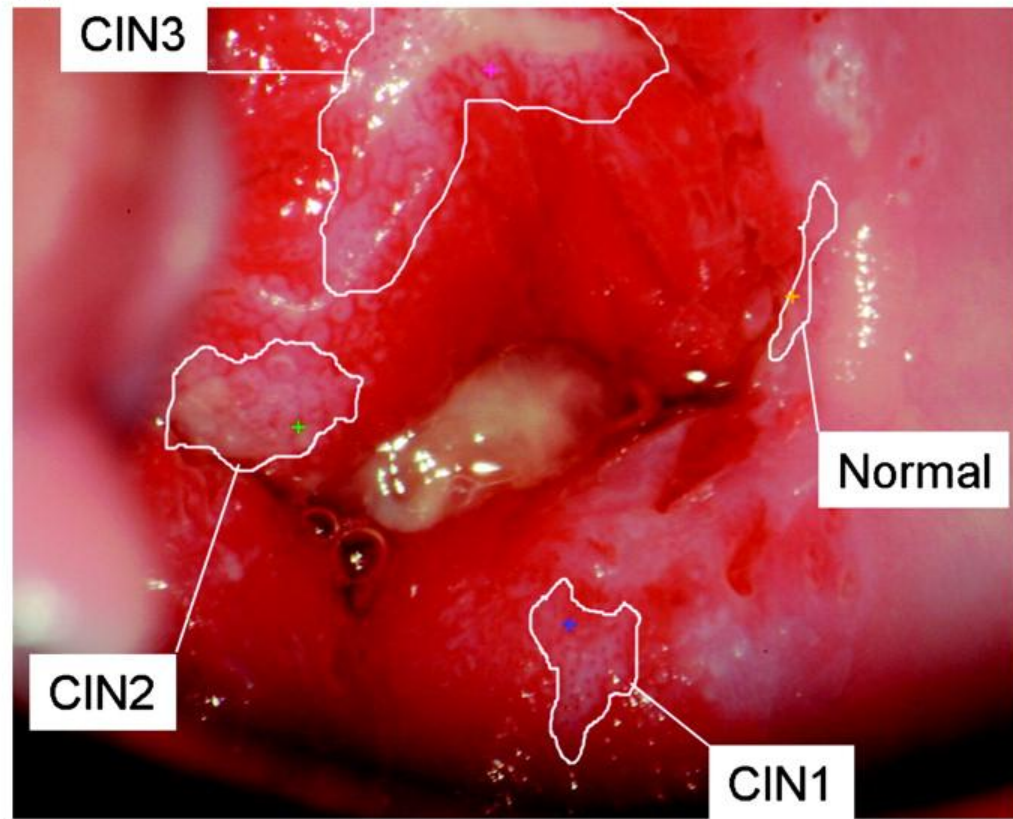
**NORMAL**

**A**



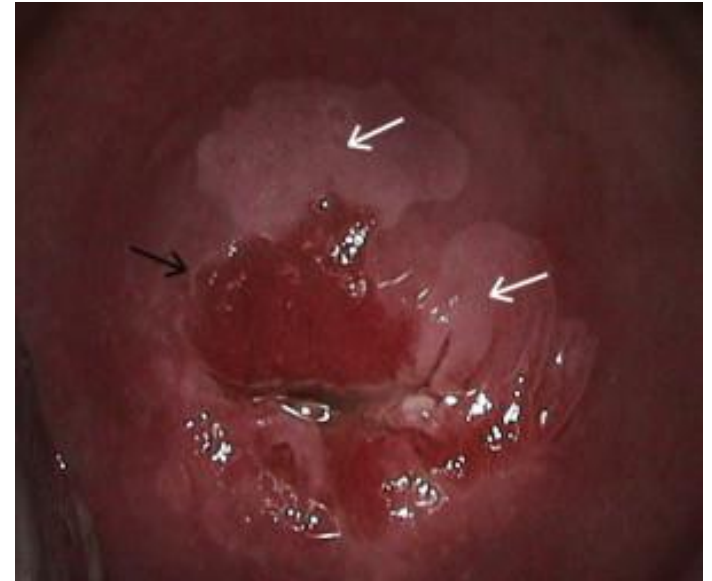
**ABNORMAL**

**B**



# VIA

## Visual Inspection with Acetic Acid



*Keep Walking*

**ACETOWHITE AREAS ARE CONSIDERED INDICATIVE  
OF PRECANCEROUS LESIONS**

# VIA

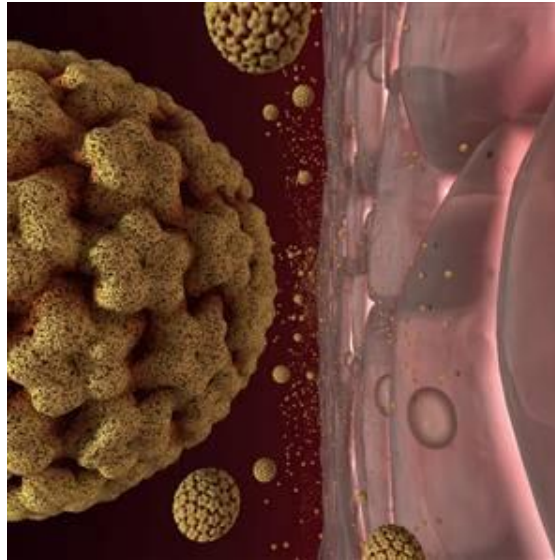
## Visual Inspection with Acetic Acid

- Simple, widely feasible and affordable.
- Minimal infrastructural requirements.
- It can be provided by a wide range of health professionals.
  - Results are **immediately available**,
    - **“SCREEN AND TREAT”**



# HPV DNA Testing

## HPV DNA TESTING



A sample of cells is collected from the cervix or vagina using a small brush or swab and sent to laboratory for processing

**DETECTION OF DNA FROM HIGH-RISK HPV TYPES**

# HPV DNA Testing

## Advantages

- **Samples** can be collected by a trained provider or, in the case of vaginal sampling, by the woman herself.
- It is **not as subjective**
- More “upstream” in the carcinogenic process, thus enabling for **longer safety margin for screening.**
- **Higher sensitivity** than Pap smear
- **More effective** among women aged **30 years or older**

# HPV DNA Testing

## Limitations

- Expensive - requiring laboratory facilities, special equipment, and trained personnel
- Takes six to eight hours for results and
- Requires follow-up visits for results and treatment.

# SECONDARY PREVENTION

## Screening & Early Detection

1

**CYTOLOGY**

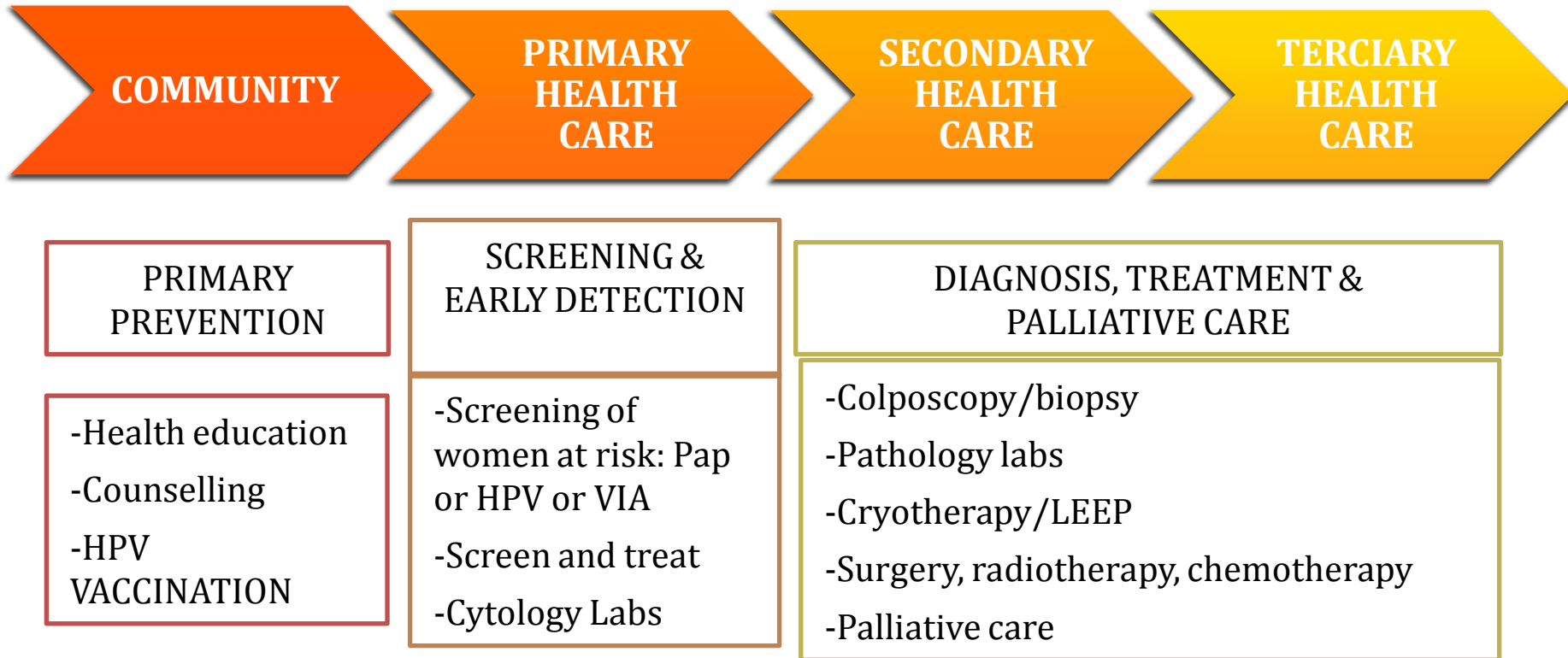
2

**VIA**

3

**HPV DNA  
Testing**

# COMPREHENSIVE CERVICAL CANCER PROGRAMS



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# Millenium Development Goals



Implementation of cervical cancer prevention and control programs contributes to the attainment of the Millennium Development Goals through universal access to sexual and reproductive health services to improve women's health



Thank  
you

# References

- Incidence/mortality data  
Ferlay J, Shin HR, Bray F, Forman D, Mathers C and Parkin DM. GLOBOCAN 2008 v2.0, Cancer Incidence and Mortality Worldwide: IARC CancerBase No. 10 [Internet]. Lyon, France: International Agency for Research on Cancer; 2010. Available from: <http://globocan.iarc.fr>, accessed on day/month/year.
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Bray F, Ren JS, Masuyer E, Ferlay J. Estimates of global cancer prevalence for 27 sites in the adult population in 2008. *Int J Cancer*. 2013 Mar 1;132(5):1133-45. doi: 10.1002/ijc.27711. Epub 2012 Jul 26
- Healthy Caribbean 2012 – Rallying for Action on NCDs Regional Strategy and Plan of Action for Cervical Cancer presentation by Dr Tomo Kanda
- WHO Library Cataloguing-in-Publication Data. WHO guidance note: comprehensive cervical cancer prevention and control: a healthier future for girls and women.
- Google Image Database

Thank You

*That's all Folks!*