

# EAMARC3 2016 PRESENTATION

Cytological Evaluation of cervical smear and cervical cancer awareness among women attending HIV Clinic in Makueni referral county hospital



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# Introduction

- Cervical cancer is one of the leading causes of death in women, ranked 4<sup>th</sup> worldwide
- Accounts for 13% of all deaths with high burden in developing economies (3)
- Oncogenic HPV causes 99.7% of cases with 70% caused by HPV 16 & 18
- Although cervical cancer is preventable, the Sub-Saharan region has the highest (34.8 cases/100,000) burden of the disease (IARC 2012)
- Its burden is surpassing infectious diseases HIV/AIDS, Malaria & TB.

# Introduction cont.....



WHO 2013- calling for governments in developing countries to strengthen healthcare systems & strategic plans for Cacx screening.

Screening uptake in developed world ~40-70% , 5% in developing countries while Kenya is 3.2% (3)

Several methods are used in screening (**who 2013, Ashok sehgal et al 2009**)

- VIA/VILI- in resource limited setting
- Cytology- majorly in developed world
- HPV testing- used together with cytology to increase efficiency

Histology used for Diagnosis & classifying lesions

# Literature review



Worldwide- cases-528,000; 85% developing countries, projected to 17M by 2020. deaths-266,000(7.5% of female cancer deaths); 9 of 10 in less developed (**who 2013, globocan fact sheet 2012**)

Africa- cases- 92,000,. based on ASR of cases 30/10000 East Africa 42.7% & deaths 57,000 ( **iarc globocan 2008 & 2012**)

Kenya – cacx is 2<sup>nd</sup> cancer in women.cases-2454 projected rise to 4261 by 2025 & deaths-1676.

Nairobi 10-15 cases weekly (Kenya cancer registry)National strategy 2012



## Literature review cont.....

At ~17.3M women make up almost ½ of total people living with HIV worldwide thus prone to HPV infection.(UN program on AIDs 2006)

Women infected with HIV are 5x more likely to be diagnosed with CA than uninfected.(NCI 2012)

Effective screening & early Tx of precancerous cervical lesions are key to prevention.(IARC 2005)

Dx at early stage increases survival rate to nearly 100%( Gullanick &myres 2007)



# Study justification

Women living with HIV are at high risk for cervical carcinoma & require targeted screening

Studies shows that women who come with invasive cancer have never been screened in there life time(who 2008)

This study aims at giving information about the type of lesions & cervical cancer awareness among women living with HIV at Makueni referral Hospital CCC.

# Research question

What are the cytological patterns on pap smear & cervical cancer awareness among women living with HIV attending Makueni referral county hospital CCC ?

# Study objectives

**Broad objective:** To describe the cytological patterns on pap smear and the level of knowledge on cervical cancer among women attending CCC clinic at Makueni referral hospital

## Specific objectives

- i. To determine the proportion of women with abnormal cytological findings on pap smears among women living with HIV attending CCC clinic at Makueni County referral hospital.**
- ii. To determine the level of correct knowledge on cervical cancer causes, risk factors and prevention among women attending CCC clinic at Makueni County referral hospital.**
- iii. To correlate the level of correct knowledge on cervical cancer and cytological findings among women attending CCC clinic at Makueni County referral hospital.**



# Methodology



## Study design

- Analytical descriptive study

## Study area

- Makueni referral county hospital.

## Study population

- Women >18 yrs. Attending CCC

## Sampling method

- Convenient/consecutive sampling

## Selection criteria

### Inclusion criteria

- Women living with HIV
- 18yrs old & above, informed consent.

### Exclusion criteria

- Hysterectomy
- without informed consent.



# Sample size determination

- Proportion used is 26.7% by Memiah et al in Kenya(1)  
CI = 95%
- Acceptable type 1 error 10%
- **Sample size is 100 women.**

# Sample collection & processing

- ❖ Trained nurses collected & made the pap smears.
- ❖ PI processed and screen the slides in laboratory

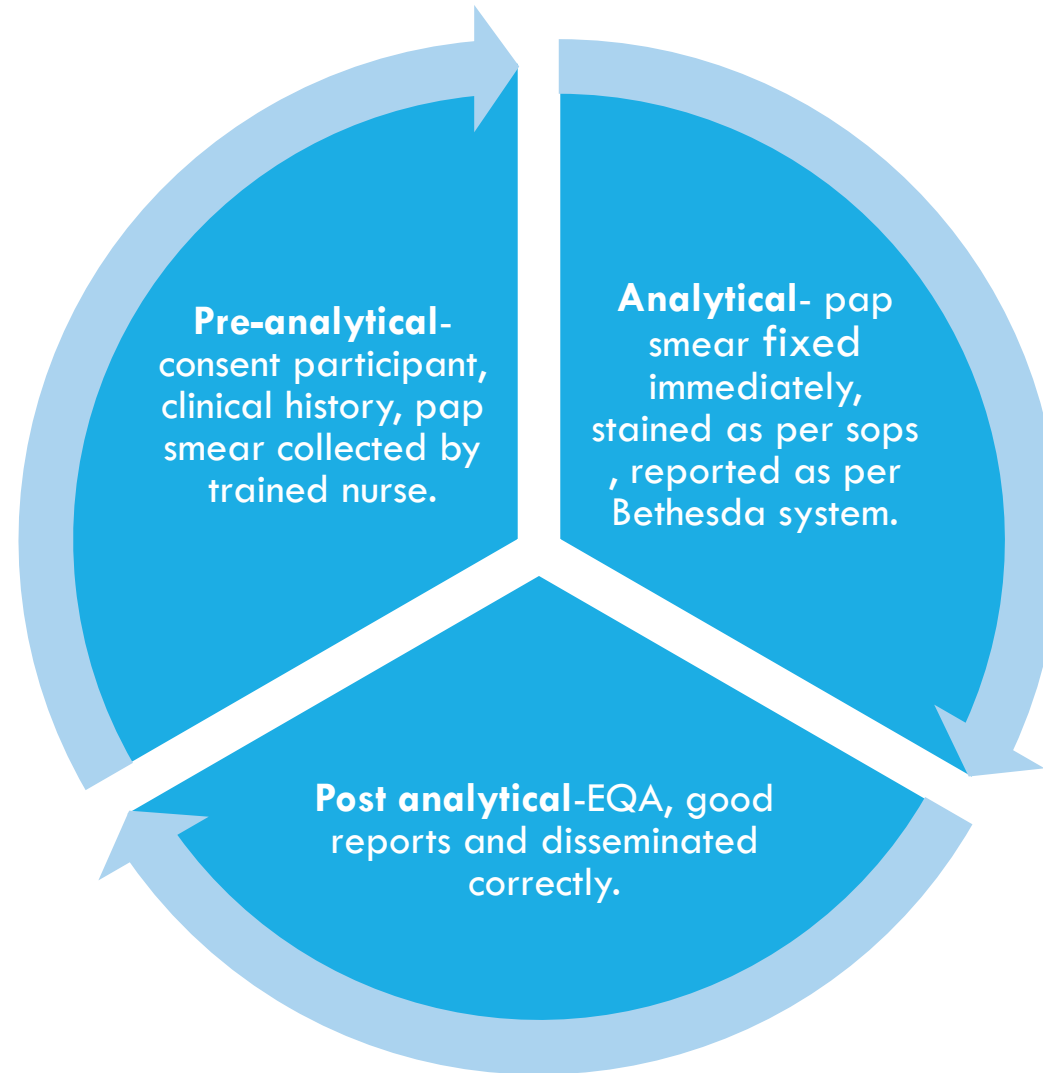




# Data management & analysis

- ❖ Data collection questionnaires & hard cover register were kept in lockable cabinets & soft copies were secured with password.
- ❖ **Statistical analysis was done using STATA version 11.2.**
- ❖ The descriptive statistics was presented as proportions & in form of table's charts and graphs

# Quality assurance





# Ethical consideration

- ❖ **Ethical approval-KNH/UON ERC. P145/2/2016**
- ❖ Written informed consent
- ❖ Privacy & confidentiality was maintained
- ❖ No added cost to the patient for additional test.

# Results

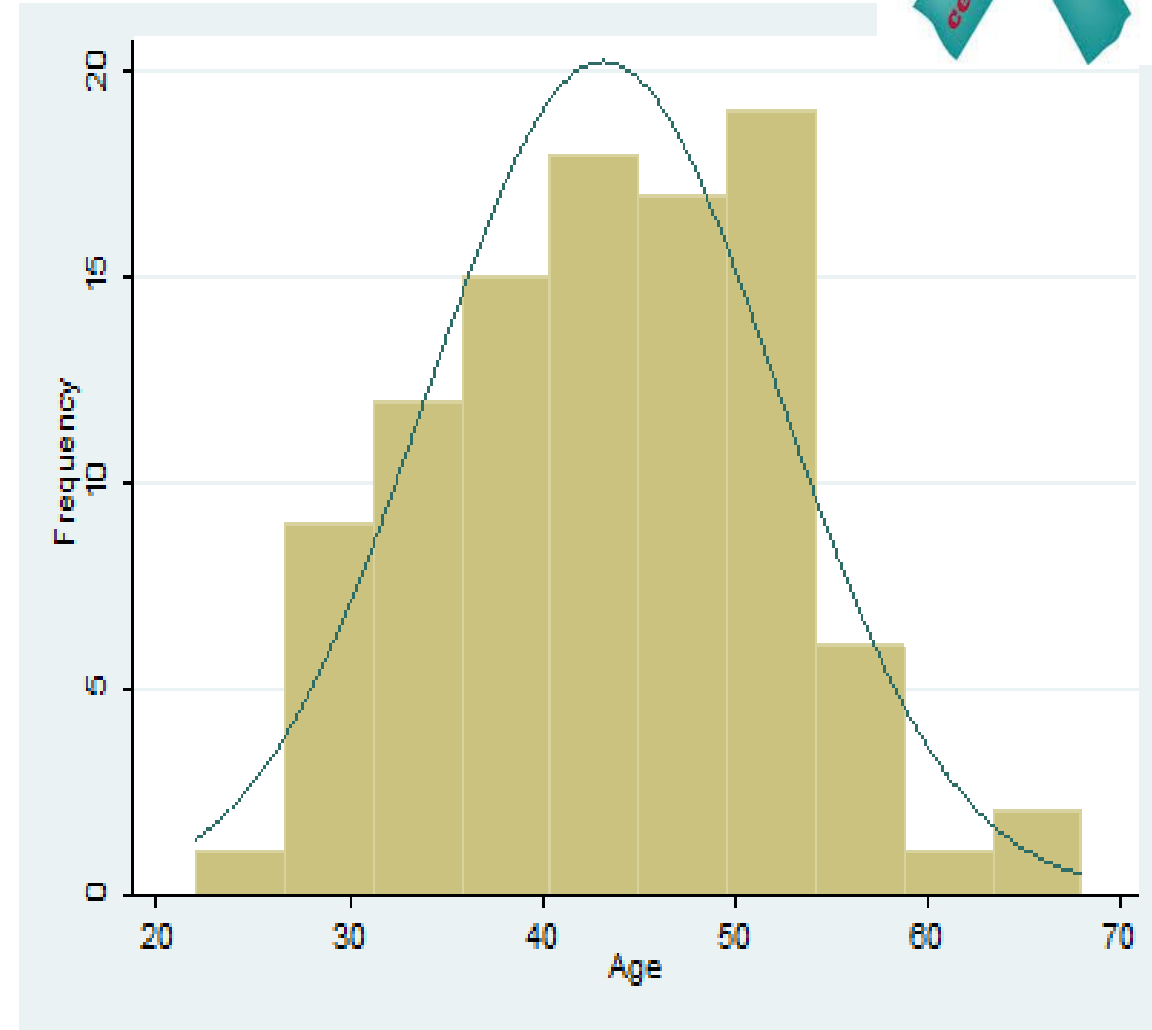
- ❖ Total of 100 women were recruited in this study





# Age

- Age range 22-68 yrs.
- Mean age of 43 yrs.
- Age was normally distributed.

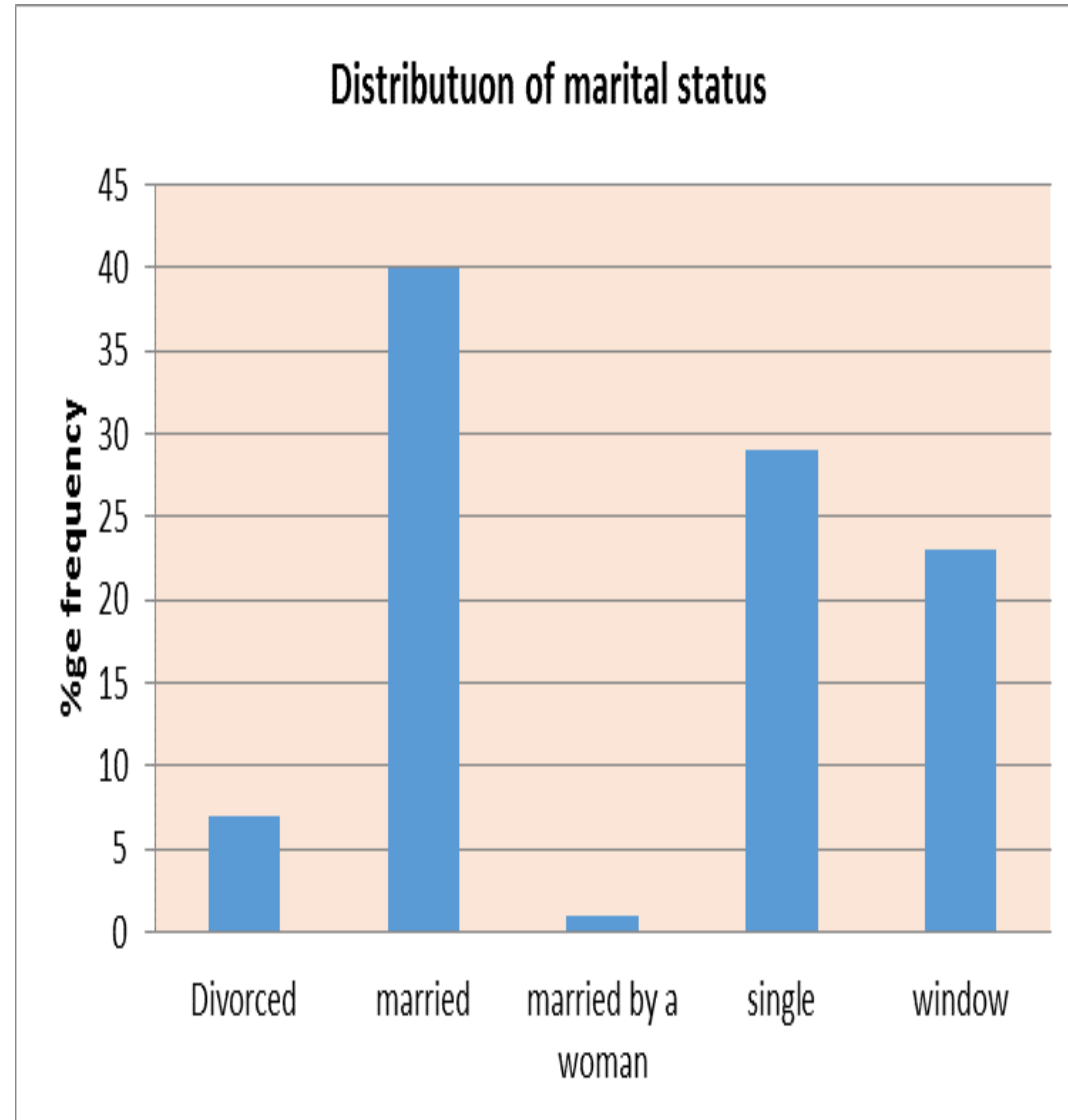






# Marital status

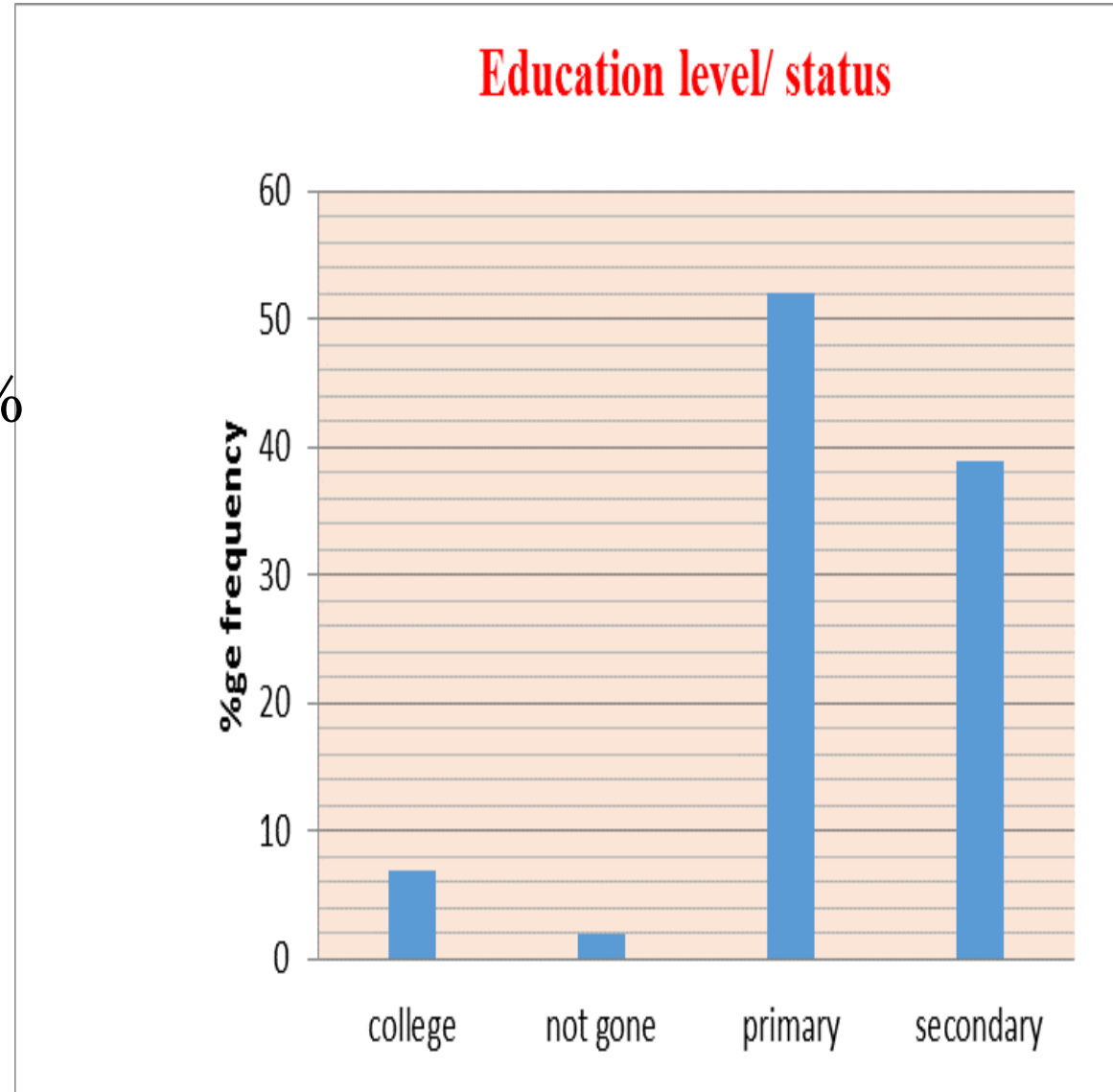
- **40% were married**
- **29% single**
- **23% widowed**
- **7% divorced.**





# Education level

- **Primary-52%**
- **Secondary-39%**
- **Tertially-7%**
- **No formal education-2%**





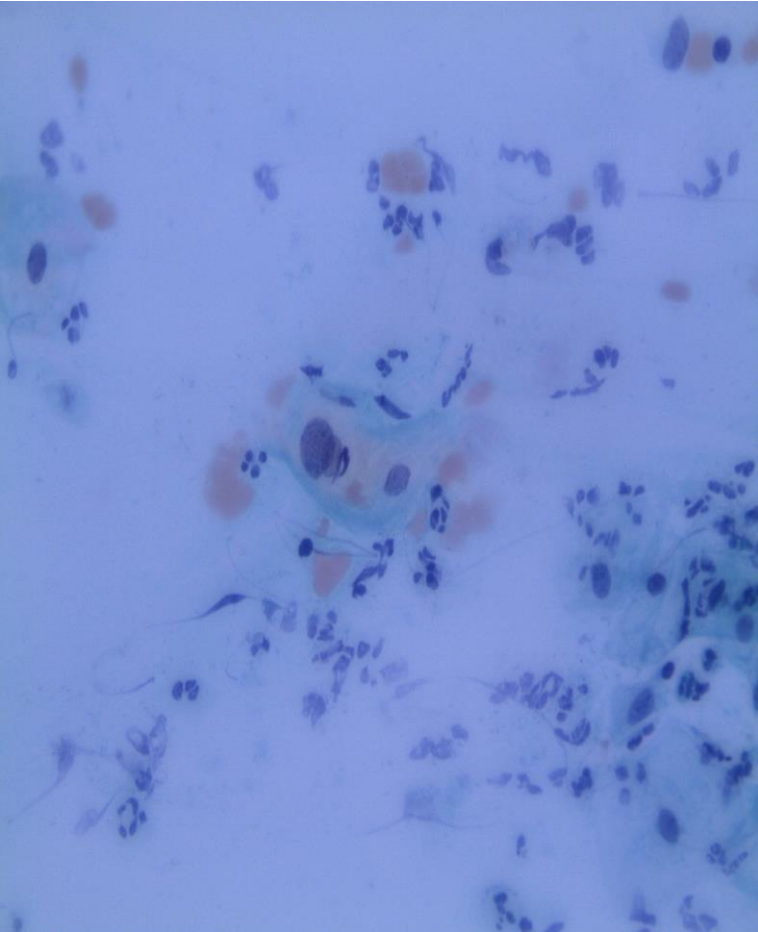
# Proportion of cervical lesions on pap smears

- ❖ Out of 100 women 75% had normal pap smears.
- ❖ **25% had (ASC-US & Above)**
- ❖ **16% were high grade lesions.**
- ❖ **11/25 lesions occurred in 35-45 yrs. with none <25yrs.**
  - 6-ASC-US
  - 3-LSIL
  - 4-ASC-H
  - 7-HSIL
  - 4-SCC

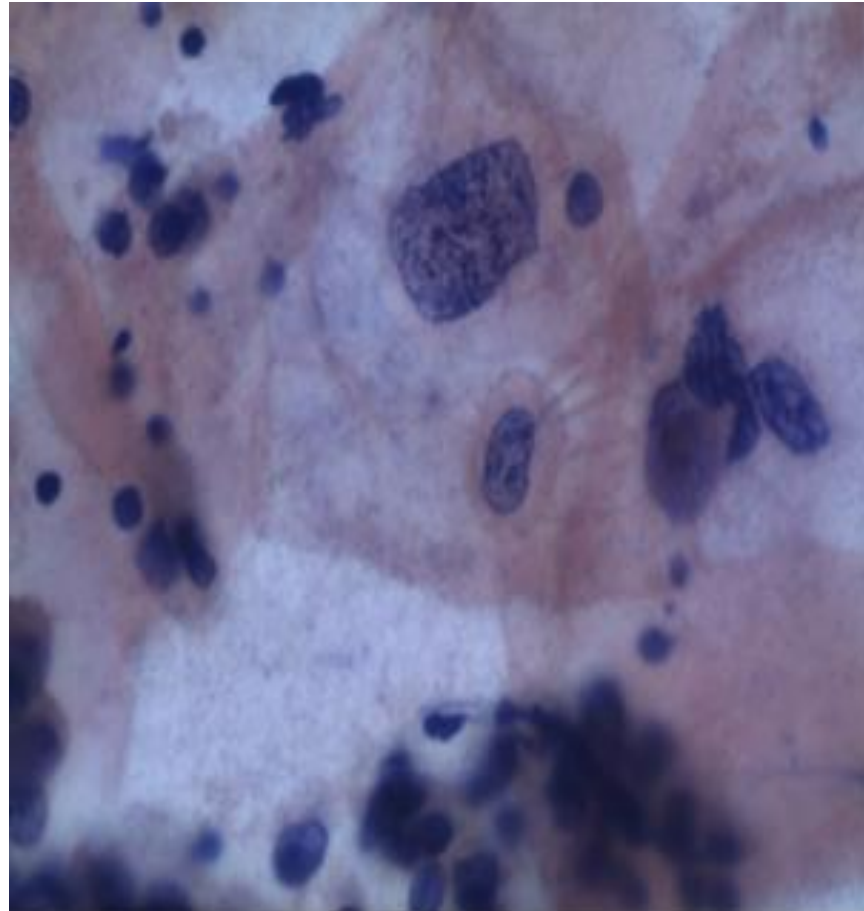


# Photomicrographs of some cases

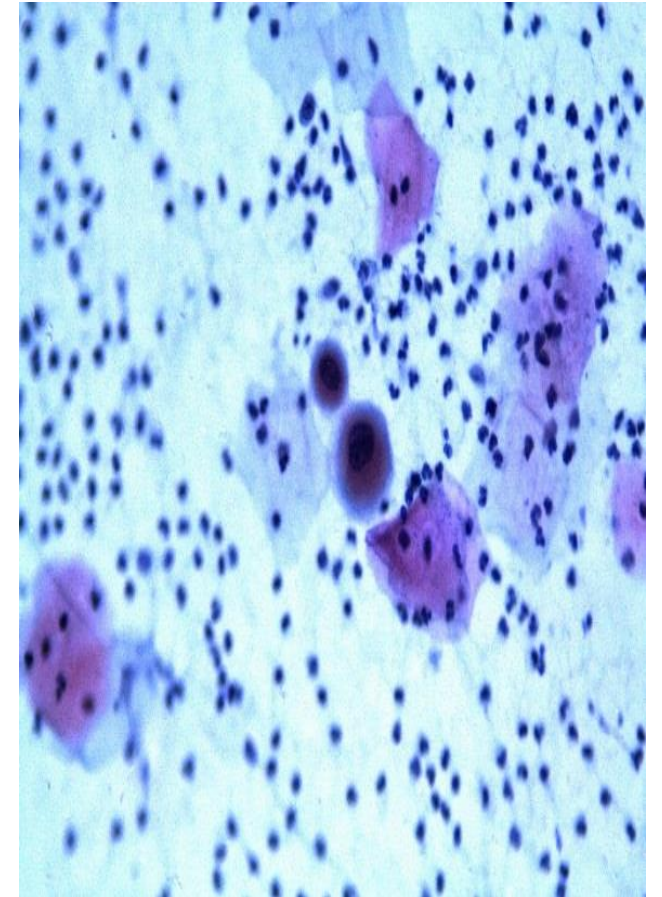
LN/ 34/16-ASC-US x40



LN/96/16 LSIL x63



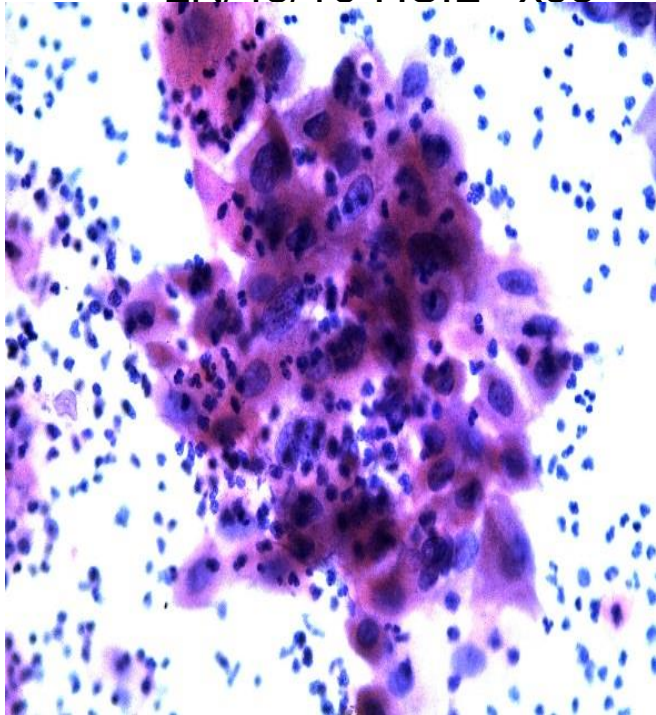
LN/ 47/16-ASC-H x40



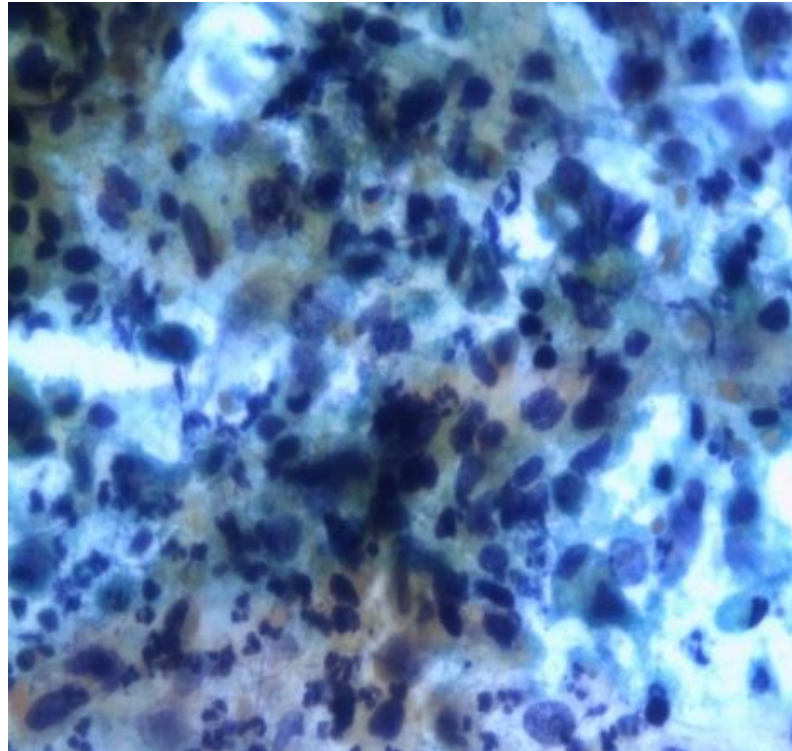
# Photomicrographs cont.



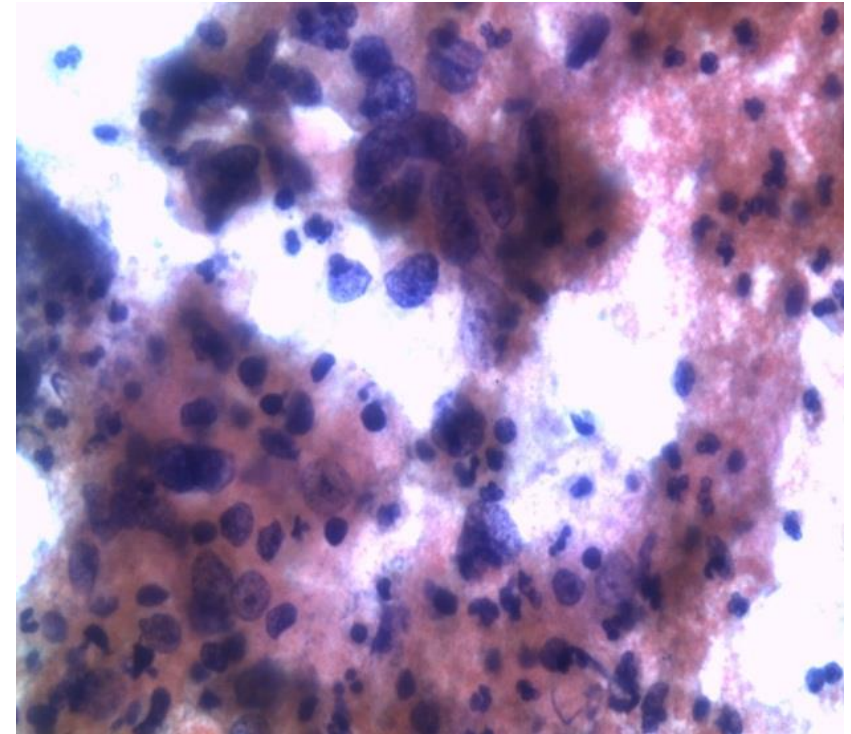
LN/45/16-HSIL x63



LN/05/16 SCC X63



LN/87/16 -SCC X63.





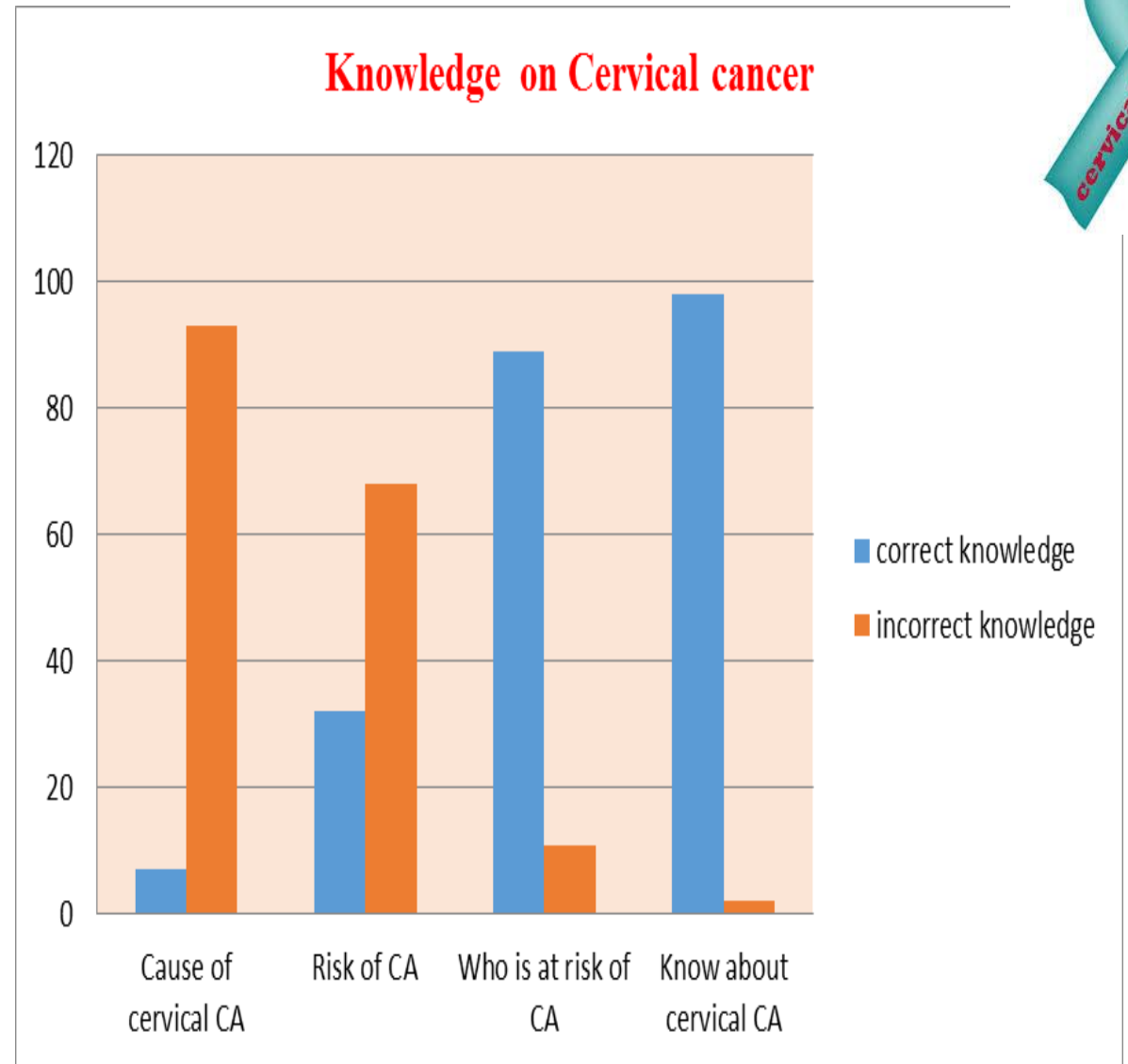
## Correct knowledge level

- **98% of women had ever heard about cervical cancer.**
- Only 7% could relate HPV with cervical cancer.
- Risk factors of cervical cancer:- sex with multiple partners, early onset of sexual activities, smoking, prolonged use of oral contraceptive, Family history of cervical cancer, STD (1 or more of the answer was **Correct knowledge**)-**38%**.
- **Common myths- unhygiene and home delivery.**
- Ways to prevent cervical cancer:-Early screening and TX, HPV vaccination, Faithful to one sexual partner, protected sex (1 or more of the answers was **Correct knowledge**)-**84%**.



# Cont.....

- Who is at risk of getting cervical cancer—**68%** women at reproductive age.
- The women felt that they are more at risk coz of their HIV status.
- Level of education > primary school predicted high level of correct knowledge on cervical cancer. (p=0.01)





# Association of correct knowledge & pap smear

- ❖ There was no association b/n pap smear results & factors measuring level of correct knowledge ( $p > 0.05$ )
  - ✓ Risk of cervical cancer ( $p = 0.6$ )
  - ✓ Prevention of cervical cancer ( $p = 0.1$ )
  - ✓ Causes of cervical cancer ( $p = 0.1$ )





# Discussion

- ❖ The study was to establish proportion of abnormal pap smear and correlate with participants knowledge on cervical cancer.
- 25% had abnormal pap smear (ASC-US and above) 16% high grade lesion.
- Previous studies on similar population showed 26.7% Memiah et al , 36.1% Joyce et al, 20% in Rwanda, 17% Ethiopia ( on care women)and 15% Thailand (postpartum and antepartum)(2,3,4,5,6)
- Higher findings were studied in Nigeria (68%) and S.A (38%)- Large population to study and in S.A only 4% were on ARV then.(7,8)



## Discussion cont.....

- In this study population women had above average knowledge on cervical cancer risk factors, cause and prevention.
- The level compares with Rosser JL in western Kenya which was from healthcare providers as its part of their standard care.(9)
- The knowledge was higher in HIV women than HIV negative women as per studies in Gabonese women, Nthiga et al and Authire in Uganda which showed very low knowledge on cervical cancer.(10,11,12)
- Knowledge on cervical cancer prevention wasn't a barrier to their screening.
- Regular screening and follow-up as per guidelines could reduce cervical cancer.
- Abnormal pap smear results could be due to reduced efficacy of VIA/VILLI current screening methods.



## Conclusion

- ❖ Proportion of women living with HIV who had abnormal uterine cervical cytology was 25% , with 16% having high grade lesions
- ❖ The study population shows adequate knowledge on cervical cancer which doesn't affect proportion of cervical dysplasia.
- ❖ There is no association btm correct knowledge on cervical cancer and abnormal pap smear.



# Recommendation

- ❖ Strategies to improve cervical cancer screening within this population are required.
  - Assessment of VIA/VILLI efficiency on screening program
  - Provision of affordable and accessible alternative screening methods.



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KEEP  
CALM  
AND  
FIGHT

CERVICAL CANCER