Comparative evaluation of Colposcopy verses Conventional Cytology and HPV DNA testing as a diagnostic triage for Single visit Screen and Treat strategy in VIA based cervical cancer screening programs in low resource settings in India.

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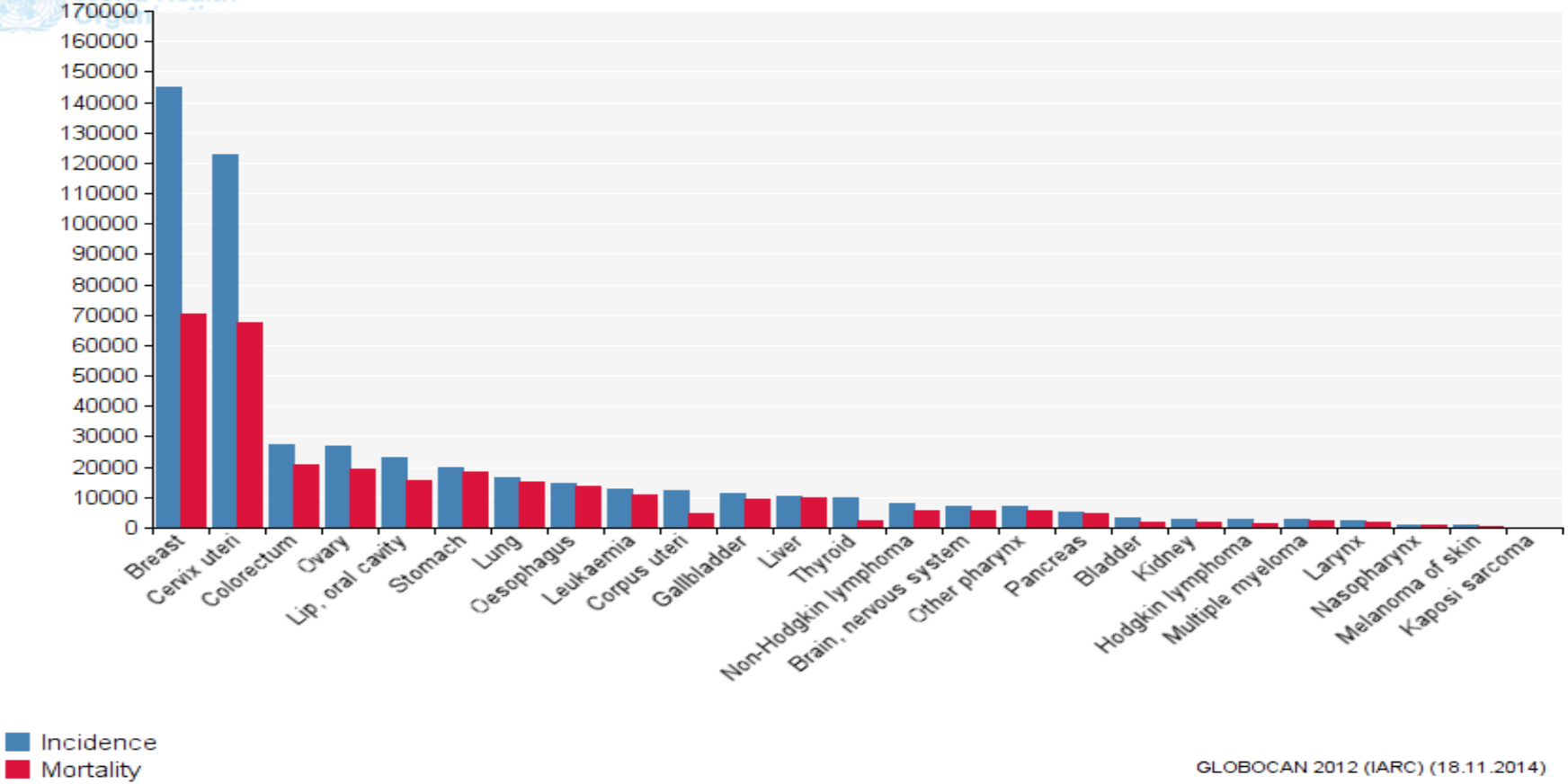
Disclosure of Interest: None Declared

India: Female, all ages



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STANDARD PROTOCOL IN PUBLIC HEALTH SEVICES SETTINGS IN INDIA

VISIT - I — **Primary Care Facility**

Screening Test

- Pap Test
- VIA
- VILI

Test Positive

VISIT - II — **Secondary care Taluk / District**

Diagnostic Test

- Pap Test
- Colposcopy
- Biopsy

2 - 3 weeks

VISIT - III — **Secondary care Taluk / District**

Results Of Diagnostic Test

- Accessing Biopsy report
- Decide Treatment options
- Appointment scheduled for outpatient treatment

2 weeks

VISIT -IV — **Secondary care Taluk /**

Treatment of CIN

- Poor compliance for cervical cancer screening, diagnosis and treatment due to multiple visits involved is perceived as the single most major barrier for their successful implementation.

- In resource constrained settings reliable health infrastructure for cytology and HPV testing programs donot exist due to technical, logistical or financial constraints.

- Single visit approaches with Screening, Diagnosis & Precancer management could be suitable alternative for effective and sustainable population based cervical cancer screening programs .

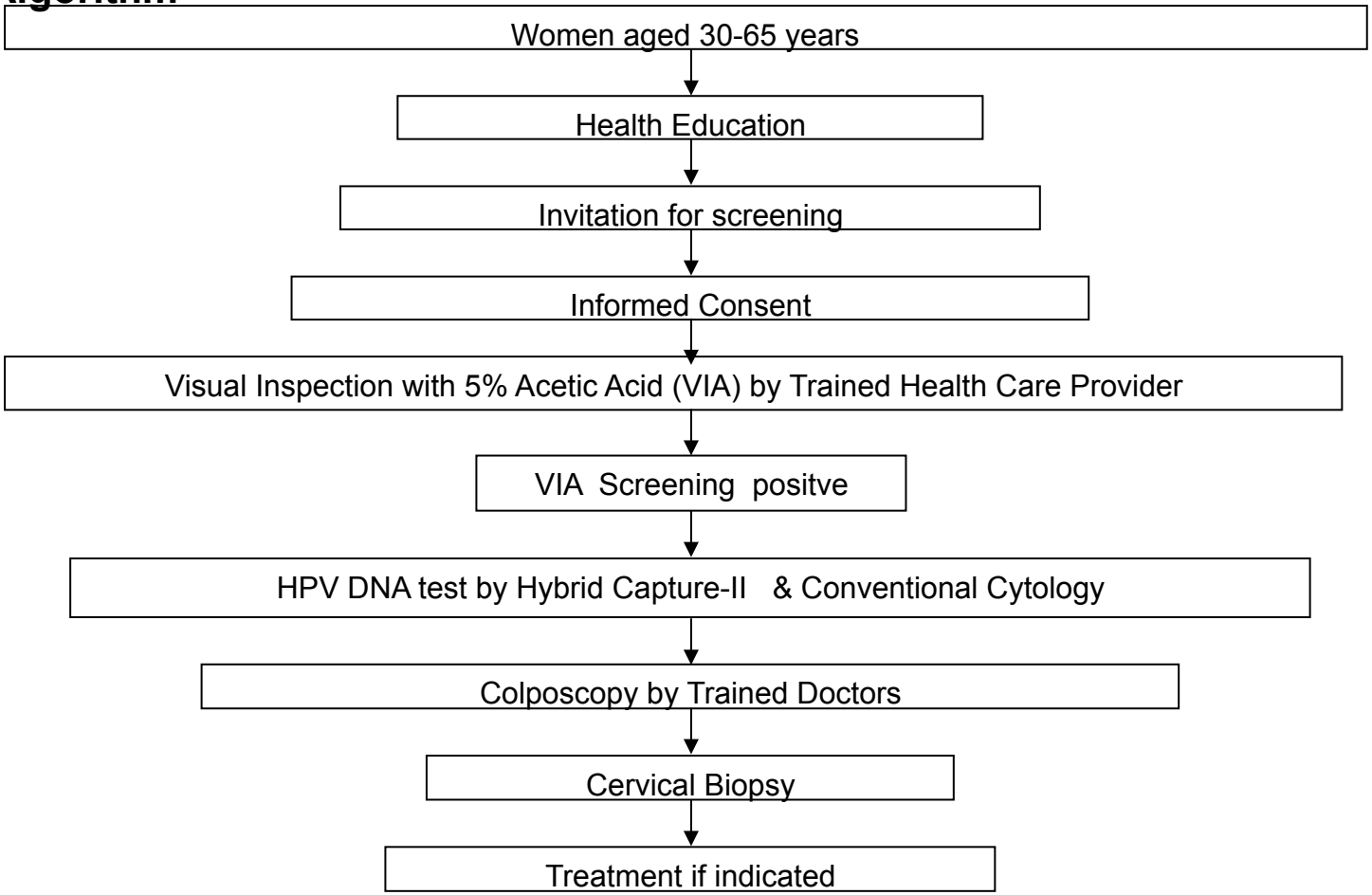
AIM: To evaluate the efficacy of diagnostic triage by colposcopy compared to conventional cytology and HPV DNA testing in cervical cancer screening programs.

METHODOLOGY: Women in the age group of 30-65 years attending the cervical cancer screening clinic in Mumbai between January to December 2013, were administered primary screening by Visual Inspection with 5% Acetic Acid(VIA).

257 VIA positive women were offered diagnostic triage with Colposcopy, Conventional cytology and HPV DNA testing.

Test characteristics and their 95% confidence intervals for Colpscopy were compared with that of conventional cytology and HPV DNA test against the reference standard of histopathology.

Screening Algorithm



RESULTS:

Mean Age of women ~ 41.13 (SD 10.65)

Mean age at marriage ~ 13.85 (SD 1.49)

N=257	CYTOLOGY		HPV		COLPOSCOPY	
HISTOPATHOLOGY	Positive	Negative	Positive	Negative	Positive	Negative
CIN 2 and Above	7	9	11	5	11	5
Normal Findings	7	234	40	201	59	182
Total	14	243	51	206	70	187

Comparative evaluation of Cytology, HPV and Colposcopy testing for cervical cancers in Tertiary care center in Mumbai , India.

Tests	Sensitivity (95% CI)	Specificity (95% CI)	PPV (95% CI)	NPV (95% CI)	FPR (95% CI)	FNR (95% CI)
Cytology	**0.44** (95% CI: 0.20 - 0.70)	**0.97** (95% CI: 0.94 - 0.99)	**0.50** (95% CI: 0.23 - 0.77)	**0.96** (95% CI: 0.93 - 0.98)	0.03 (95% CI: 0.01 - 0.06)	0.56 (95% CI: 0.30 - 0.80)
HPV	**0.69** (95% CI: 0.41 - 0.89)	**0.83** (95% CI: 0.78 - 0.88)	**0.22** (95% CI: 0.11 - 0.35)	**0.98** (95% CI: 0.94 - 0.99)	0.17 (95% CI: 0.12 - 0.22)	0.31 (95% CI: 0.11 - 0.59)
Colposcopy	**0.69** (95% CI: 0.41 - 0.89)	**0.76** (95% CI: 0.70 - 0.81)	**0.16** (95% CI: 0.08 - 0.26)	**0.97** (95% CI: 0.94 - 0.99)	0.24 (95% CI: 0.19 - 0.30)	0.31 (95% CI: 0.11 - 0.59)

CONCLUSION:

Diagnostic triage for VIA positive women by colposcopy was comparable to HPV DNA testing and was more sensitive than conventional cytology.

In settings with limitations in establishing diagnostic cytology and molecular facilities and also difficulty in accessing health-care facilities, Triage by Colposcopy will facilitate pre cancer Treatment in Single visit thereby increasing compliance for diagnosis and treatment for **Effective** and **Sustainable** cervical cancer screening programs in India.