



SCREENING IN LOW RESOURCE SETTING

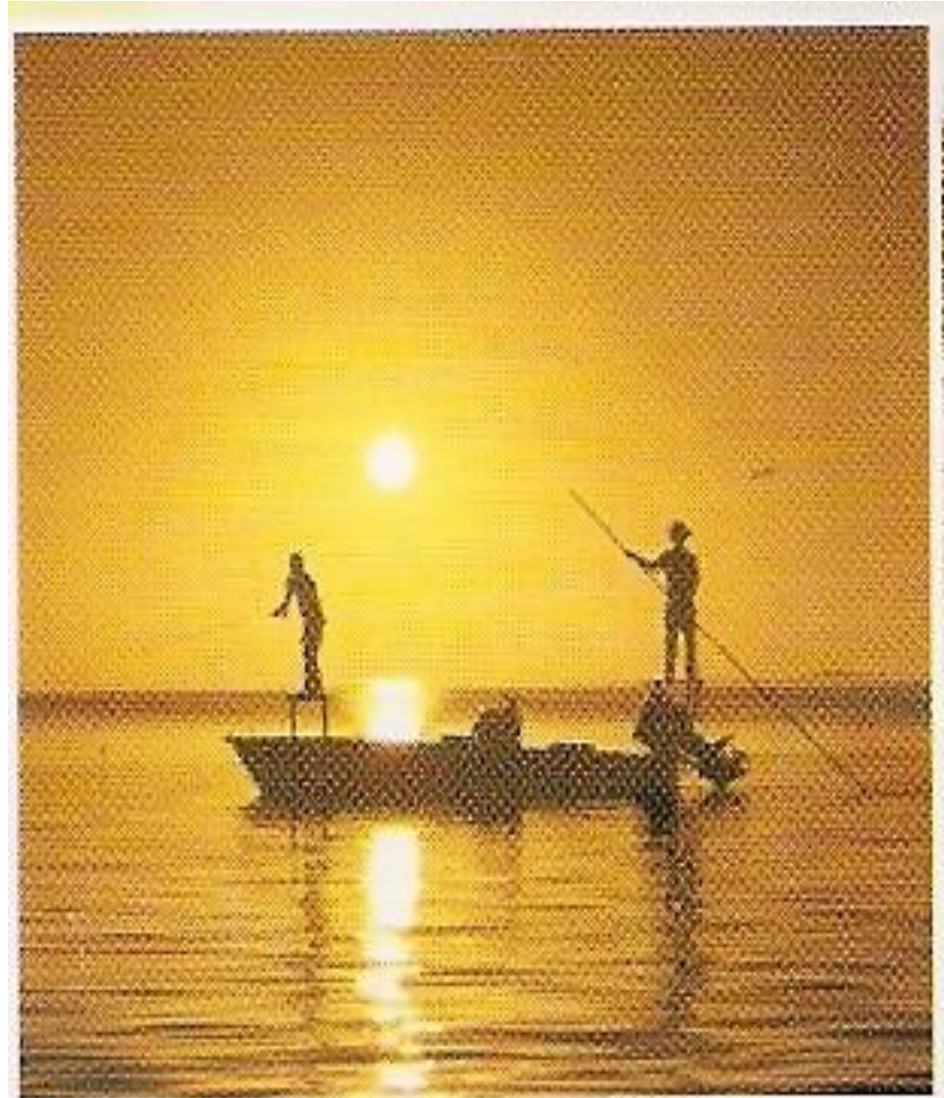
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Oncology*

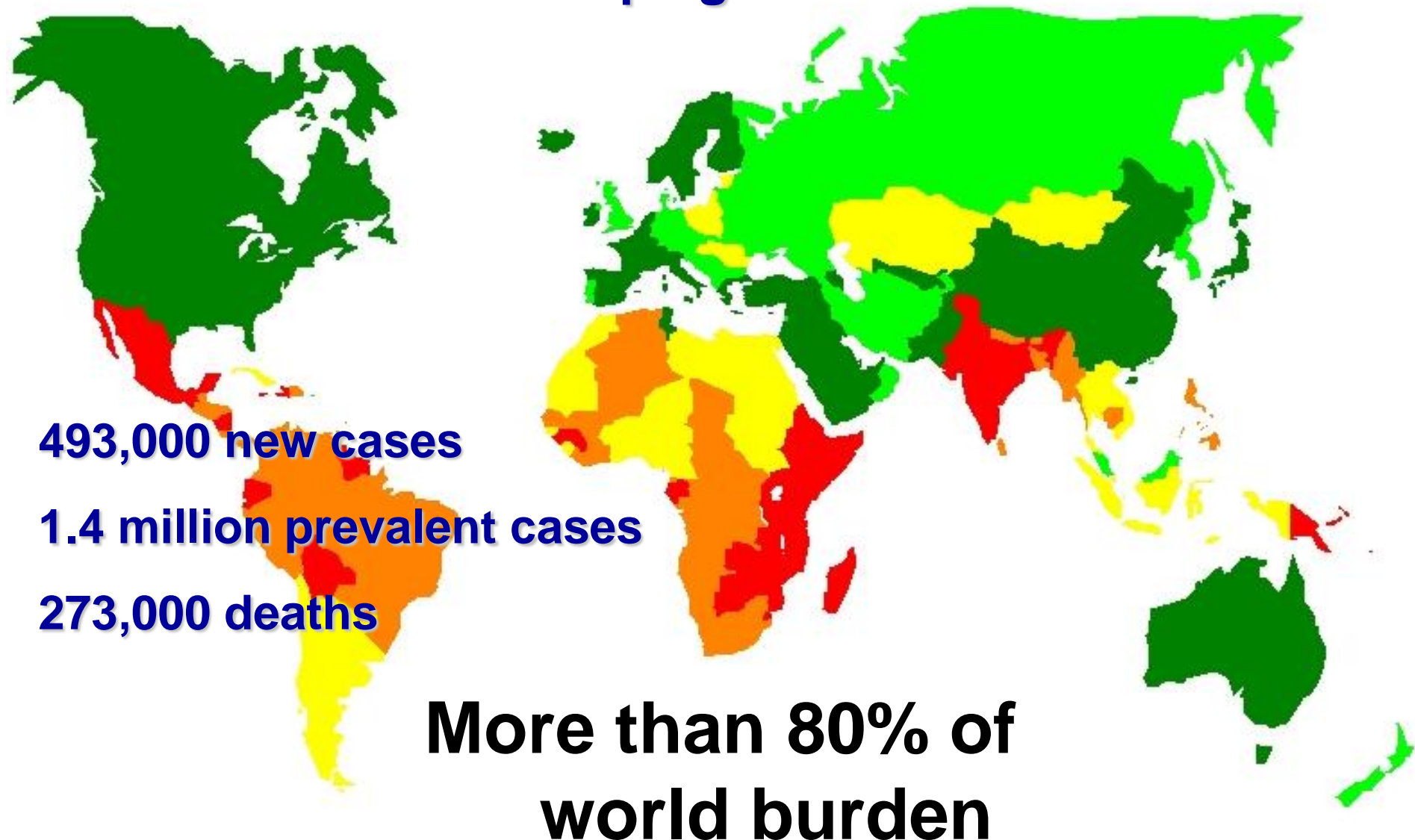
*Kidwai Memorial
Institute of Oncology*

BANGALORE

Karnataka , India



Cervical cancer continues to be a major burden in most developing countries



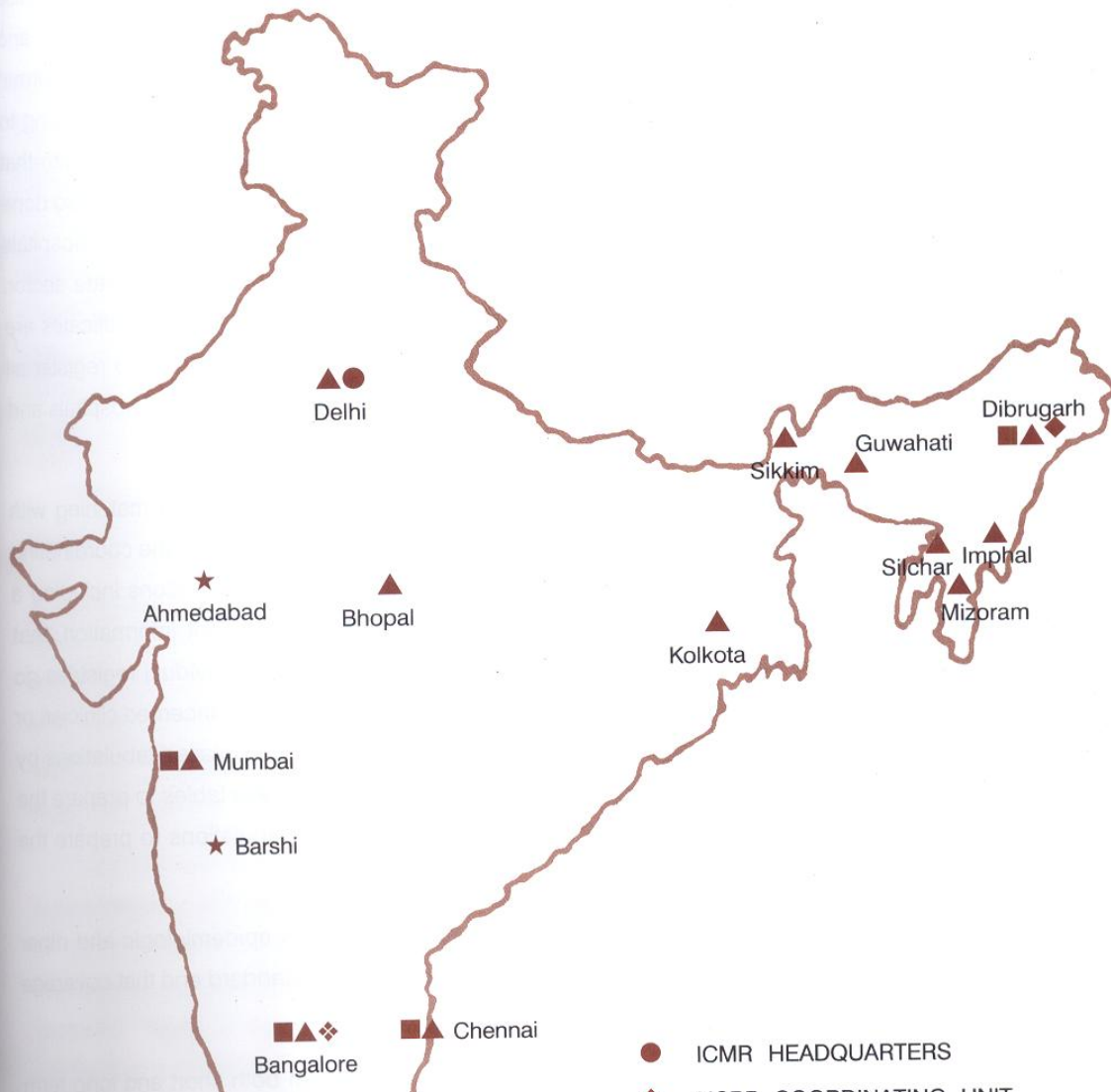
■ < 3.9 ■ < 7.4 ■ < 11.3 ■ < 16.8 ■ < 53.5

Magnitude of **CERVICAL CANCER**

- Worldwide per year **500,000** new cases (15 % of all female cancers) estimated, (>**50%** die)
- 83 % (**415,000** cases) occur in developing countries
- **India** alone **contribute** one fifth (**132,000** cases) of **total burden** in the world
- **One** in **45** women had the probability of developing **cervical cancer** (0 – 74 years)

NATIONAL CANCER REGISTRY PROGRAMME

(Indian Council of Medical Research)



LEADING **SITES** OF **CANCERS** : **FEMALES**

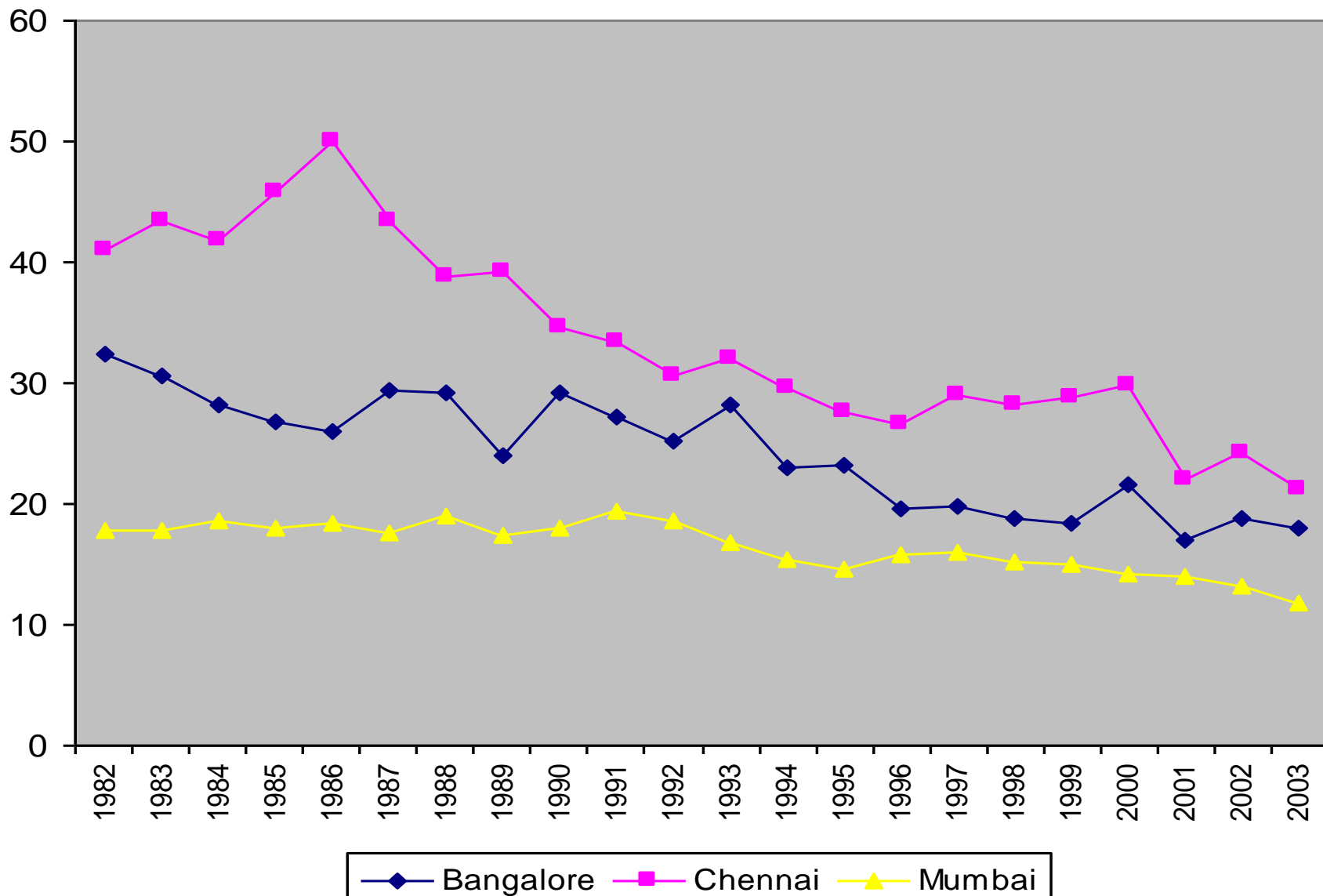
Pooled AARs/100,000 in **INDIA**

SITE	AAR
BREAST	25.1
CERVIX	21.2
OVARY	6.7
ORAL CAVITY	6.4
OESOPHAGUS	5.5
STOMACH	3.4
GALL BLADDER	3.2
LEUKAEMIA	2.9
LUNG	2.7
CORPUS UTERI	2.5

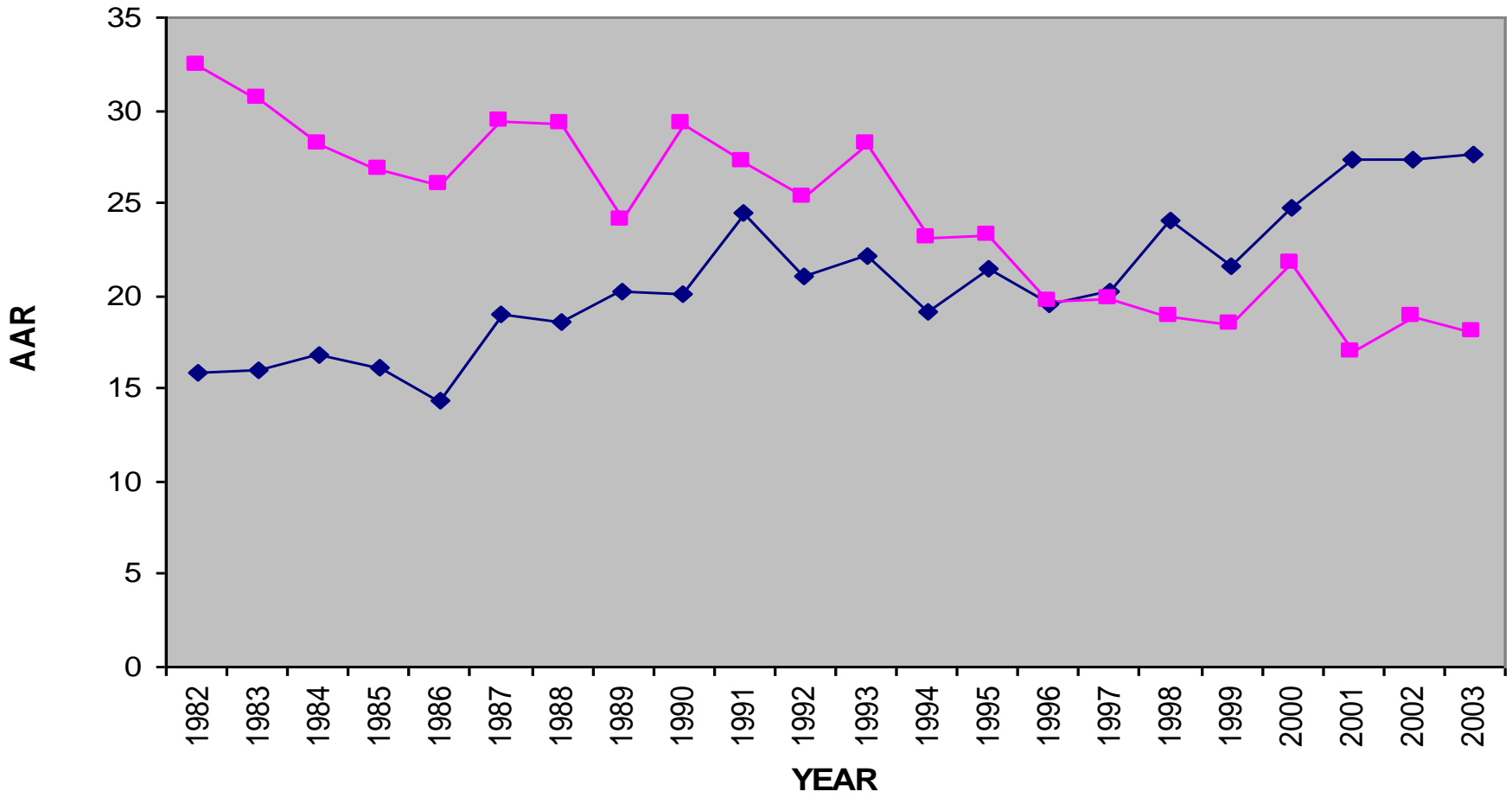
Cancer of the Cervix Uteri

- **Cervical cancer** is the **second** leading **site** of cancer among women **in all the Indian registries except at Chennai and Barshi** where it is the **first** leading **site**.
- In India approximately **1 out of 27 to 104 women are at a chance to develop cervix cancer during their life time**
- The incidence of cervix cancer begins to rise in the late twenties.
- Estimated number of new cervical cancers in 2007 in India – 132,000.

TRENDS OVER TIME - CERVIX :1982-2003

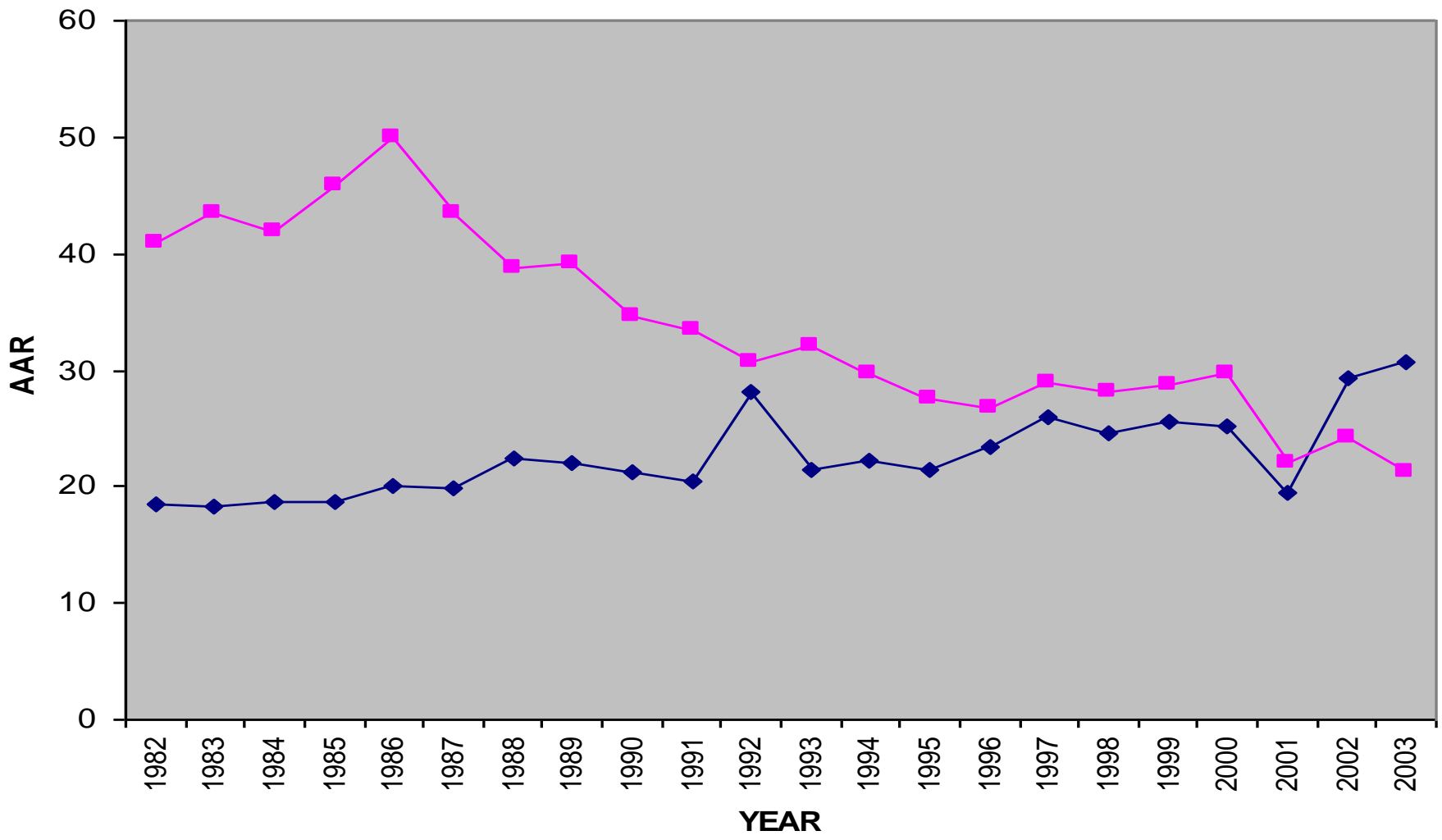


TRENDS OVER TIME: BREAST & CERVIX BANGALORE:1982-2003



◆ Breast ■ Cervix

TRENDS OVER TIME: BREAST & CERVIX PBCR - CHENNAI: 1982-2003



◆ Breast ■ Cervix

CERVICAL CANCER BURDEN

- Annually **132,000 new cases** of cervical cancer register in PBCR
- **75,000 women die of Cx CA** per year in **India**
- **> 80 %** require **diagnostic & treatment facilities**
- **84 %** occur between the age of **35-64 yrs**
- **20% default** after the diagnosis at RCC
- **30% non-complaint** to complete treatment
- **50% complete trt & < 30 %** complaint for F.U.

Inequities:

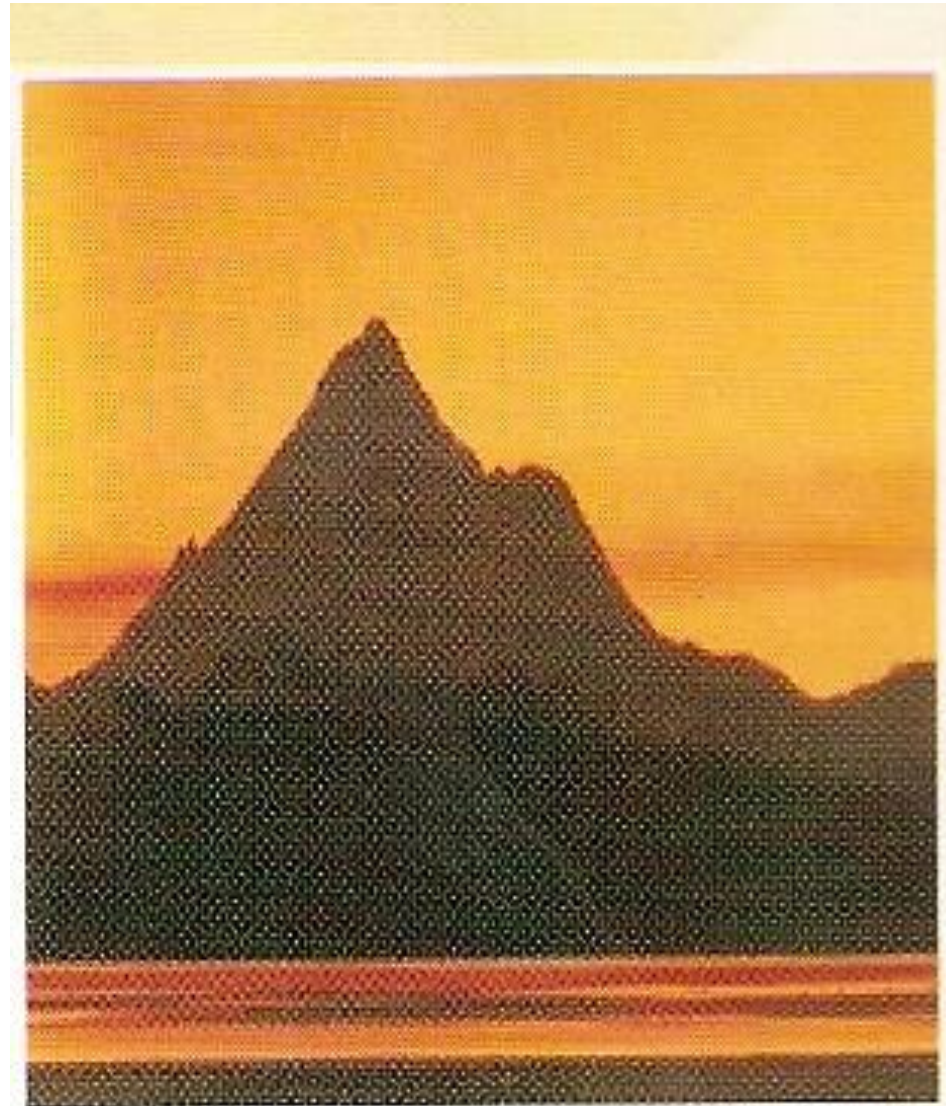
Developed countries	Developing countries
Incidence and mortality rate declined in the past 40 yrs.	Incidence and mortality continues as an enormous problem
Accounts for 3.6% of new cases, cumulative risk of 0.8%	Accounts for 15% of new cases, cumulative risk of 1.5%
Screening services for 80% of population.	Screening services used by 5% of population.
Successfully organized cytology based screening	No organized screening programmes available.

Key Barriers to Cervical Cancer Prevention

- **Early Detection Services – Unavailable, Unreliable**
- **Treatment of Precancer**
 - **Inaccessible**
 - **Inappropriate**
 - **Inadequate follow up of women needing treatment**
- **Lack of monitoring & evaluation for timely corrective action & improving program performance**
- **Failure to reach target age group**
- **Limited awareness of cervical cancer as a health care problem, lack of a policy, lack of political will**

Magnitude of Cervical Cancer: Low Resource Countries

- **UNDIAGNOSED & UNNOTICED DEATHS** due to *Cervical Cancer* is a concern to the civilized Nation
- Responsibility to identify these needy women



Importance of Cervical Cancer Control in INDIA

- Emergence is need of :
- Health education,
- Trained health care providers ,
- Cytotechnicians,
- Committed resource personnel & expertee
- Gynaec / Oncology team
- Gynaec Onco -Pathology
- Gynaec preventive Oncology
- Social & community medicine , policy makers



Role of Professional Organizations

- **AGOI**
- **FOGSI**
- **IGCS**
- **ASGO**
- **ISO**
- **AROI**
- **IAPMO**
- **IAPCC**
- **NGO**





Screening options available:

1. Conventional cytology

2. **Alternative approaches:**

-- VIA

-- VILI

-- VIAM

-- **HPV DNA testing**

3. **New experimental methods:**

-- Polar probe

-- Molecular biomarkers(E6/E7 mRNA exp,p16 exp)

-- Microarray analysis.

EARLY DETECTION : CA CX??

PAP TEST

HPV TEST

VI/ VIA / VILI

CERVICOGRA
PHY

COLPOSCOPY

TRUE SCAN

VISUAL INSPECTION TECHNIQUES

- VI : By HW / ANM :
Down staging Cx Ca
- VIA :
Sensitivity : 66-96%
Specificity : 64-98%
[Obs /Gyn Surv 2003;58(8):543-50]

*Detection of CIN 2/3
using VIA ,VILI & PAP
of ASCUS / LSIL :
3.7 ,3.3,4.5 & 4.2 / 1000
WOMEN .

[Int J Gyn obs .2009;105(2):145-9]



RCTI in a low resource setting in Rural India

- Single round cytologic testing or VIA : not associated with reduction in advanced Cervical Cancer.
- The age std rate of invasive cancer among screen negative women was almost four times less in HPV -ve women compared to cytologic & VIA -ve women , indicating that -ve HPV test had a high NPPV .

[N Engl J Med 2009 ; 360: 1385 -94]

Screen & Treat modality ???

- By VI & Cryotherapy at the same sitting : effectively cured CIN in 88% women , including baseline diagnosis of CIN 3 .

(Int J Gyn Obs 2008;101(2):172 - 7)

- ?? Safety , Acceptability & feasibility

[Am J Obs Gyn 2007 ; 196 (4) : 407]

- A Randomized trial in South India found a 25% reduction in Cervical -Cancer incidence & 35 % reduction in mortality compared to controls with VIA followed by Cryotherapy .

(Lancet 2007 : 370:398-406)

Screen & Treat modality ???

- By PAP & HPV test ;
- Overcome the problem of loss to F.U. but still present the problem of infrastructure & cost
- ? Women over 40 years screen at 5 yr
- Ideal situation in high resource setting :
- HPV DNA testing : 20-40 % high sensitivity but 5-10% lower specificity than PAP .
- [J Natl Cancer Inst Monogr 2003 ; 31:89-96]
- The -ve predictive value by PAP & high - risk HPV DNA -ve is extremely high , over 99.9 % in most studies .

Development strategy for Early detection of Cervical Cancer

Involvement of family / men.

Panchayat raj personnel.

Primary health care providers.

District hospital staffs.

Medical college colleagues

Non-governmental organisation.

Regional cancer institutions.

Policy makers

Resources for Cervical Cancer Control-India

- Twenty seven regional cancer centres.
- Total 304 Medical colleges
- Government medical colleges
- Private medical colleges
- District hospitals
- Primary health care units
- Public & private Organization

Cervical Cancer Screening Programme

- Organised or Opportunistic.
- Selective or General
- Single or Multiple phase.
- ↓ ↓ of incidence.
- ↓ ↓ of mortality.
- ↓ ↓ of cost.

Cervical Cancer –A PUBLIC HEALTH PROBLEM

“The focus of cancer must shift
from PALLIATION TO CURATIVE
and
from CURATIVE TO PREVENTION ”

As a National Strategy for Early Detection of Ca Cx : AGOI Proposal [2006]

HE + V.I.Of Cervix

C3 programme

↓ ↓ ↓
colour contour cleanliness

↓
Normal

↓
↓
Abnormal

↓
Suspicious

pap test

clinical examination
colpo / cervical Bx

AGOI

Proposal.....Gynaecologist

•

PAP TEST

I

II

III

IV

V

ASYMP

Rx inf

Ref colpo clinic

Annual

Rpt pap

3-5 /10yrs pap

after 6/12m

Colpo Clinic

Satisfactory

Unsatisfactory

Abnormal

Normal

Abnormal



Colpo Bx

Reg F/U

Colpo Bx+ECC



N CIN I/II CIN III

CINIII CIN I/II **N**

FU cryo CB/
LEETZ LASER

CB cryo / TAH
LEETZ
TAH **FU**

STRATEGIES FOR CERVICAL CANCER

- Simple
- Cost effective
- Minimally reliant upon infrastructure
- Easy to learn
- Easy to train health care providers
- Results should be available immediately
- Integrated into "Screen & Treat" strategy

CERVICAL CANCER SCREENING & DETECTION OF CIN(Jan 2000 - 03)

	HPV test	Pap test	VIA
Eligible	34, 126	32,058	34,074
Evaluable (Screened)	27,192 (79.7 %)	25,549 (79.7 %)	26,765
Positive	2,812 (10.3 %)	1,787 (7.0 %)	3,733 (13.9 %)
Colposcopy	2,505 (89.1 %)	1,507 (87.9 %)	3,684 (98.7)
CIN1	603 (2.2 %)	486 (1.9 %)	1,429 (5.3 %)
CIN 2,3	245 (0.9 %)	26 (1.0 %)	195 (0.7 %)
Cancer	73 (0.3 %)	83 (0.3 %)	82 (0.3 %)

Cx Ca. Incidence and Mortality

[The NEJM – Apr 2, 2009, No14, Vol 360 : 1385-1394]

	HPV test	Pap Test	VIA	Control
Stage I	60 %	60 %	60 %	28 %
Death	34	54	56	64

Barriers to Implementation

- Community & Individual barriers :
 - * Cx Ca Public health problem
 - * Lack of KAP about Cx Ca
- Medical barriers :
 - * VIA : operator dependent with high inter-observer variation
 - * Requiring proper quality control & training assessment protocol
 - * Frequent retraining health care providers
 - * Unnecessary treatment of normal women in single visit approach
 - * High ref rate for further evaluation

VIA:

- No uniform criteria for reporting VIA positivity
- No permanent record system for VIA
- Not suitable for postmenopausal women where SCJ receded

Barriers to Implementation

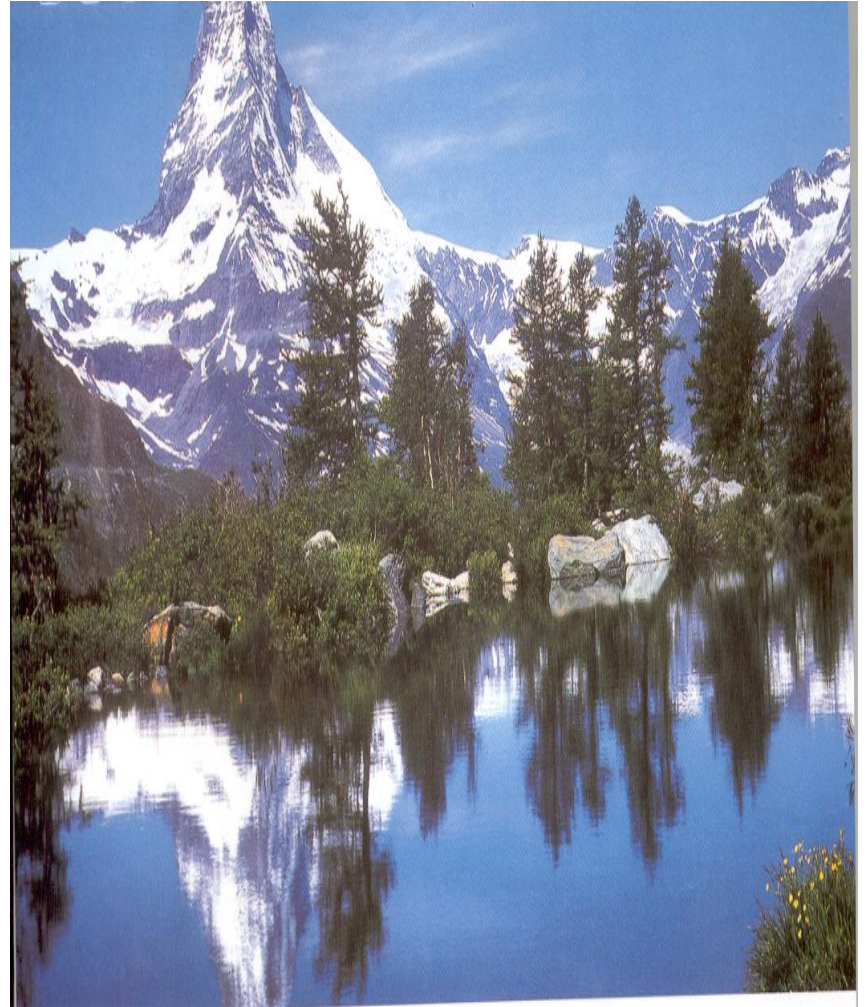
- See & Treat :
 - * Not suitable for women with HG lesion
 - * Not suitable for endocx lesions
 - * Not suitable for vag Fx /large/extension
 - * Not suitable for atrophic cervix
 - * Maintenance of cryotherapy equipment
- Single time HPV test : Cost & lab facility

Barriers to Implementation

- Technical & Organizational barriers
- Political barriers
 - * Lack of priority for women reproductive health
 - * Lack of national policies & appropriate guidelines

IIGO Program Joint Collaborations in 2005.....

- IIGO program :
- Gyn prevent Oncol
- Gyn Surg oncology
- Gyn Medl & Rad Onc
- Gyn-Onco-pathology
- Gynaec Onco Nurse Training
- Gyn -Onco Registry



Role of Gynaecologist: Cervical Cancer Control

- Appropriate screening test.
- Early detection
- Treatment of preinvasive lesion
- Clinical staging/ early reference
- Appropriate selection of patients for surgery
- Identification & reference of poor prognostic patients
- Adequate management.

AGOI PROPOSAL : CA.CX : CURE AND CARE

- Fund raising for PREVENTABLE, & CURABLE CANCERS.
- To establish palliative / Hospice care.
- To improve QOL.
- To develop **IIGO** & Breast Ca Care foundation , Research & training centre

CHALLENGES : CA.CX



VISION
HARMONY
CO-PERATION
CO-ORDINATION
INTEGRITY
UNITY

AGOICON - November ,12th -14th, 2010 - B'lore
IGCS Regional workshop ,April 2-3rd INDIA







The 13th Biennial Meeting, International Gynecologic Cancer Society (IGCS)



Save the Date

*Prague, Czech Republic, European Union
October 23-26, 2010*

www.kenes.com/igcs

THANK YOU

