



" Medical aspect of HPV-related
disease - need for new treatments"

Oslo 05.06.07


O.E.Iversen

Department of Obstetrics and Gynecology,
Haukeland University Hospital
Bergen, Norway

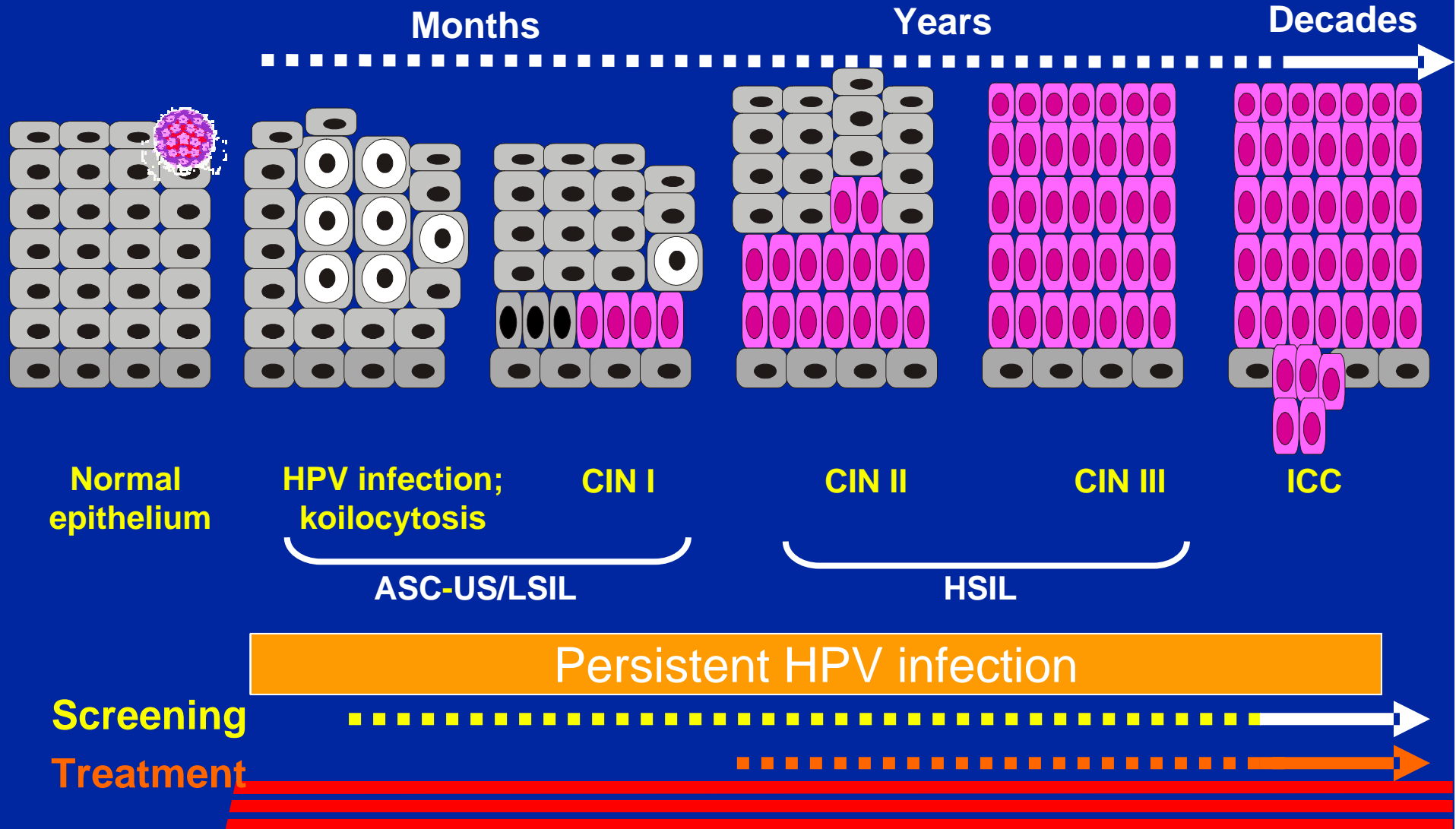




Cervical cancer: a – model disease

- **Caused by a chronic HPV infection.**
 - **Appr. 80 % life time infected**
 - **Appr. 10 % get cancer precursors
(3000/year)**
 - **1-2 % get invasive cancer (ca 300/år)**
- 

Disease progression



The fight against HPV-related disease: Development

- **”Observation of natural course”**
- **Therapy and**
- **Secondary prophylaxis**
- **Primary prophylaxis (vaccination)?**



Cervical cancer still a problem in well organized countries!

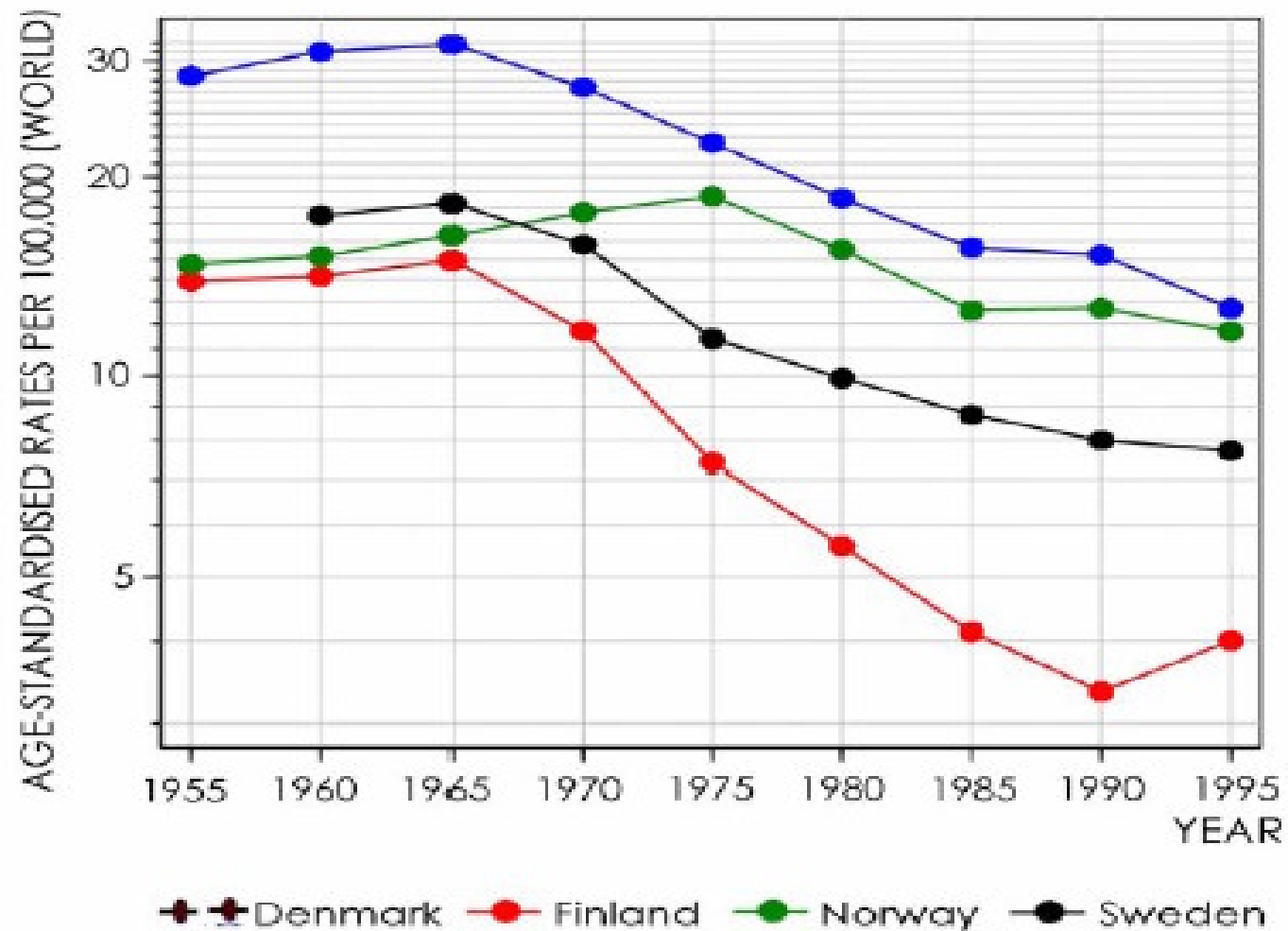
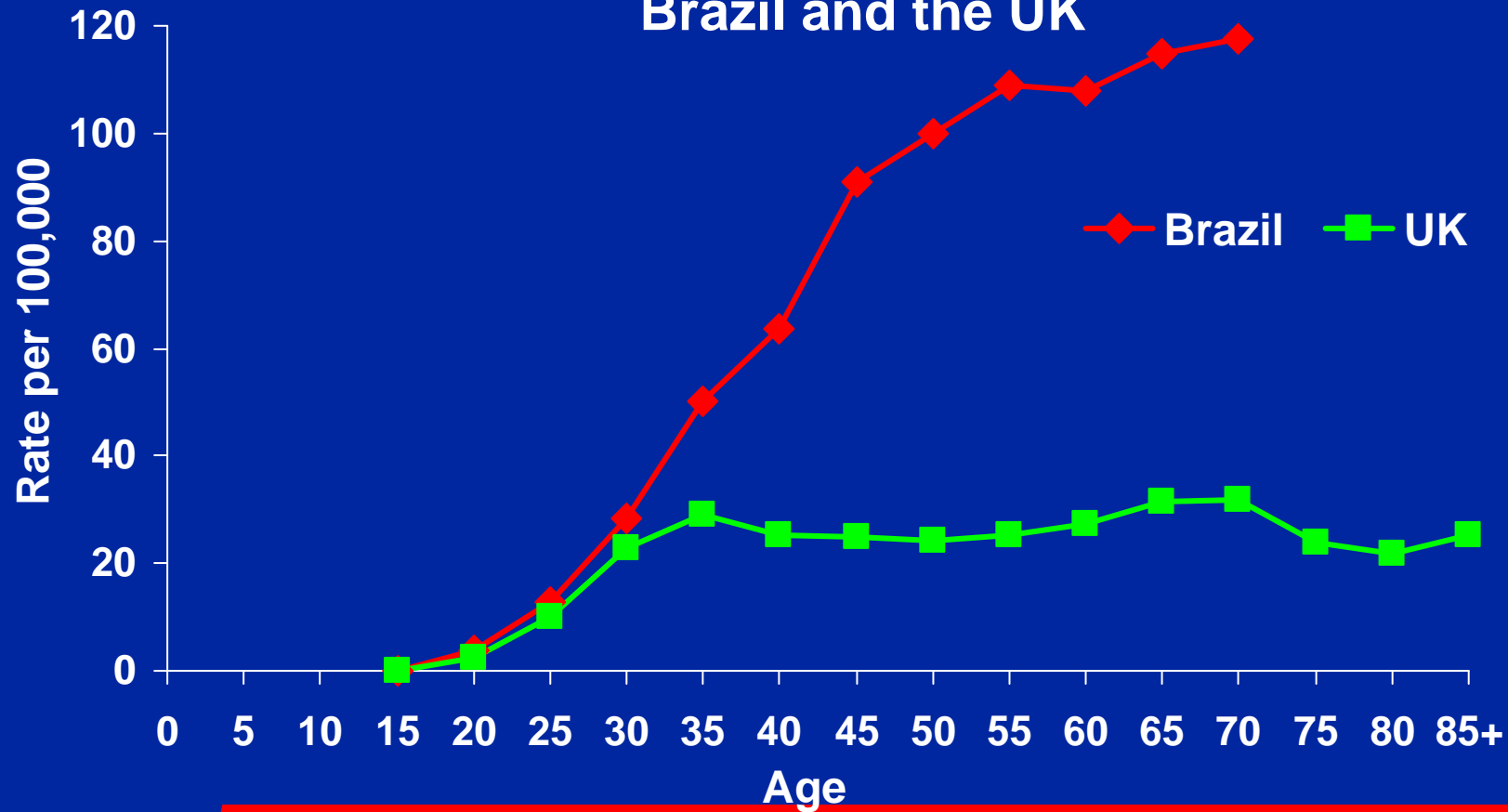


Fig. 8. Time trends in age-standardised (World) incidence rates of cervical cancer incidence in four Nordic countries [48].



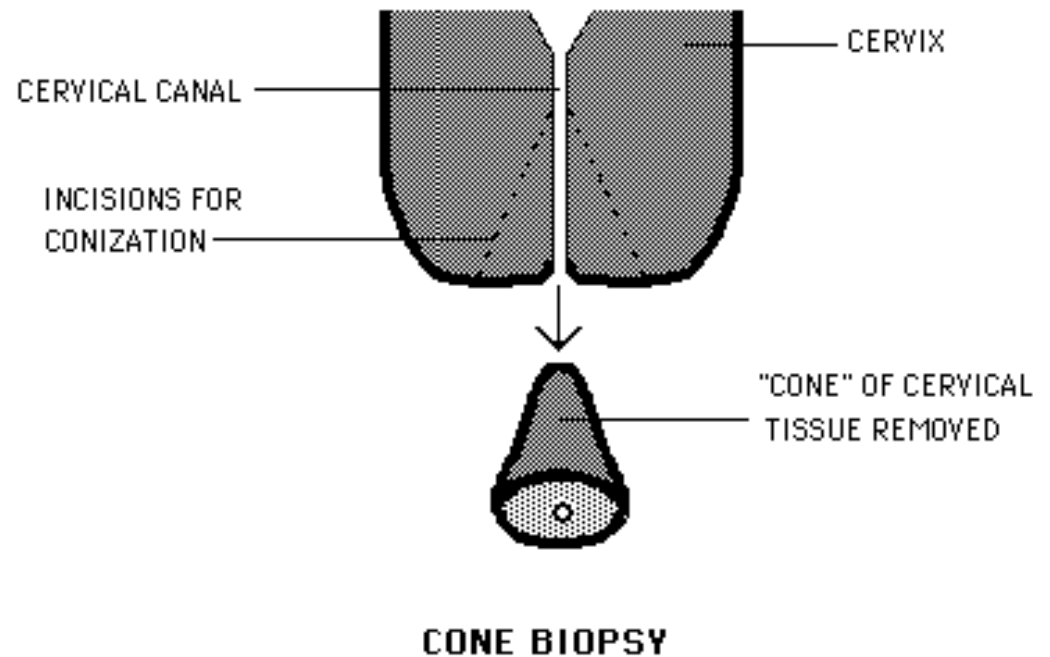
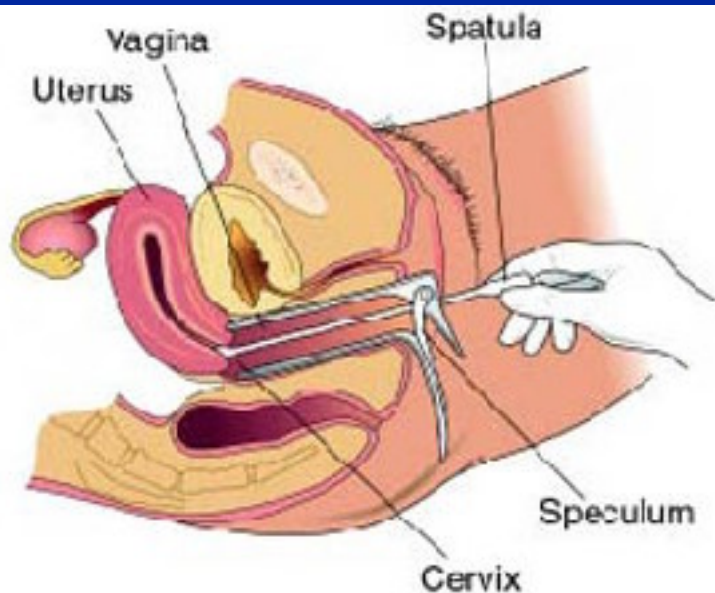
Age-specific incidence With/without screening

Age-specific incidence rates of cervical cancer in
Brazil and the UK




Treatment of precursors - conization

- Laser
- Loop/LLETZ/radiowave
- "Cold knife"
- Cryotherapy
- Other?





HPV – related resources - cervix Norway 2005 (pop 4,5 mill)

- 500.000 gynecological exam. and smears
 - 30-40.000 controls for abnormal smears
 - 10.000 (?) biopsies
 - **3000 conizations**
 - 300 cx cancers
 - **Extra pregnancy visits because of conizations**
 - **Extra late abortions and premature deliveries because of conizations**
 - 10.000 treatments for condylomas
- 

Recent studies on risk of preterm delivery after conization

	Cases	RR	(95 % CI)
● Hagen -95	79	9,0	(3,7-21,7)
● Forsmo -96	87	2,2	(1,04-4,5)
● Ganesch -05#	79	4,0	(1,0-16)
● Sjøborg -04 < 37 w	742	3,45	(2,4-5,1)
● Sjøborg < 32 w		4,2	(1,7-10,2)
● Sjøborg < 28 w		13,1	(1,7-100)
● Albrechtsen -05	5521	2,6*	(2,3-2,8)
● Albrechtsen 24-29 w		4,7^α	(3,7-6,9)

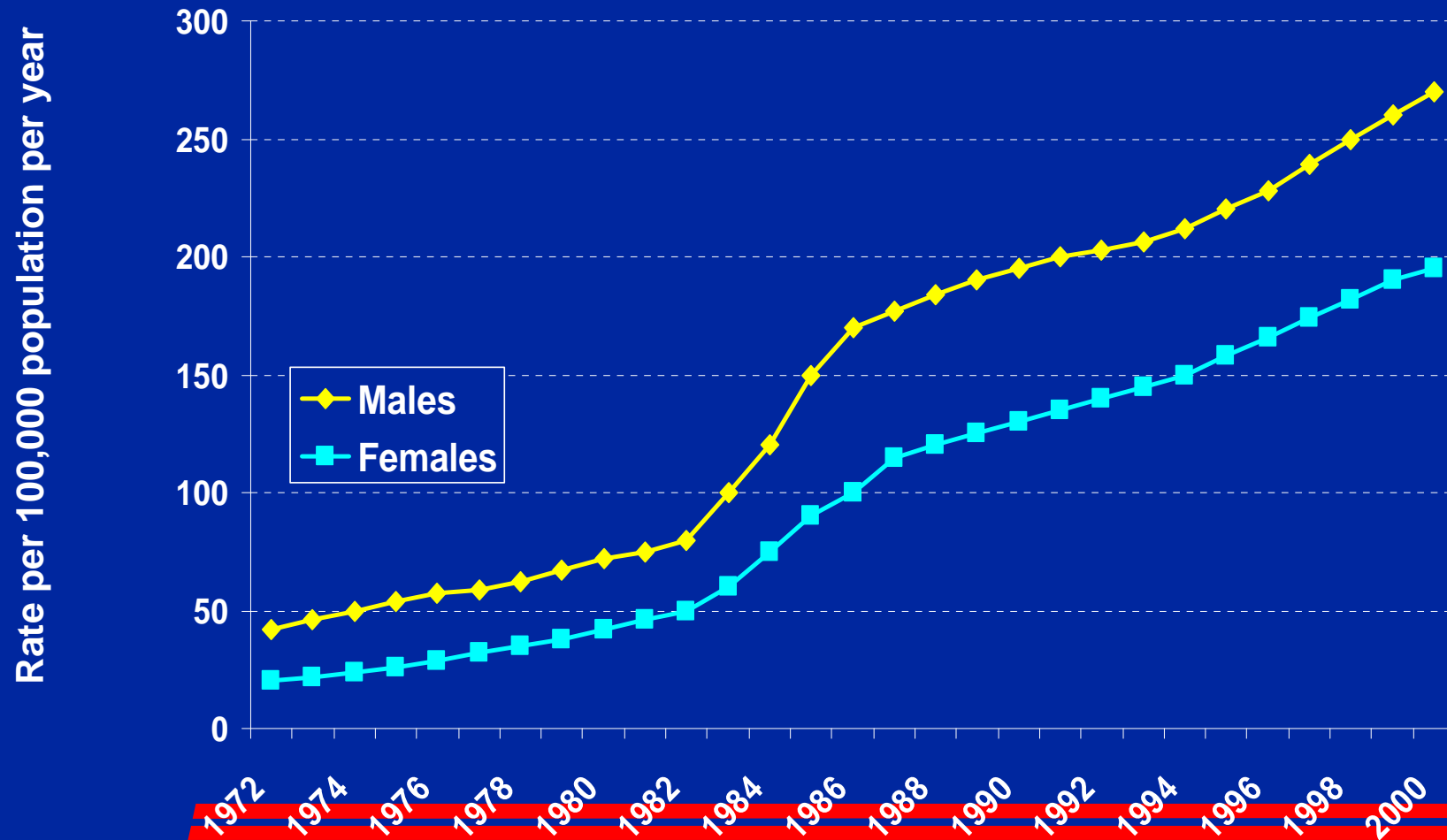
● # LEEP 25 mm

● *30-36 weeks. (Increasing risk with increasing prematurity)

Will HPV infections continue to rise?

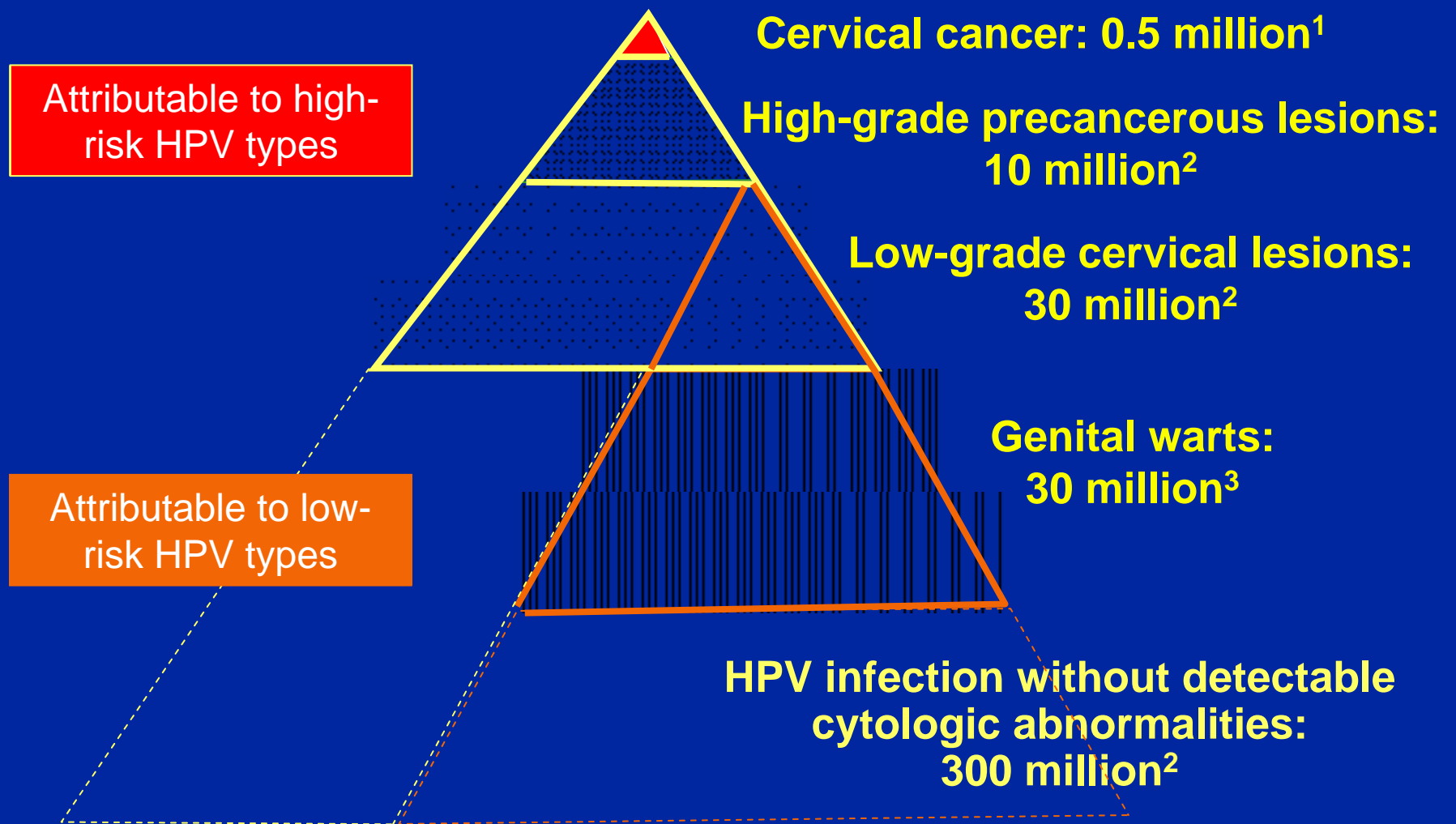
Rates of diagnoses of HPV-related genital warts (U.K.)

CDR Weekly 2001; Vol 11(35)



Seroprev. Norway* 1970 – 2 % 1996 – 20% + 1000%

Estimated yearly incidence of HPV-related disease



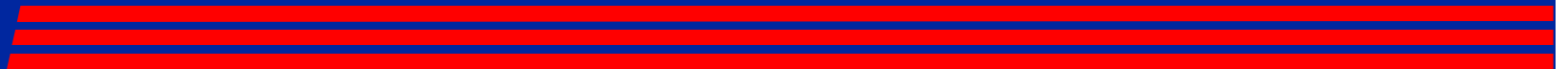
1. World Health Organization. Geneva, Switzerland: World Health Organization; 2003:1-74. 2. World Health Organization. Geneva, Switzerland: World Health Organization; 1999:1-22. 3. World Health Organization. Feature. 1990;152:1-6.




HPV tests to identify high-risk patients?

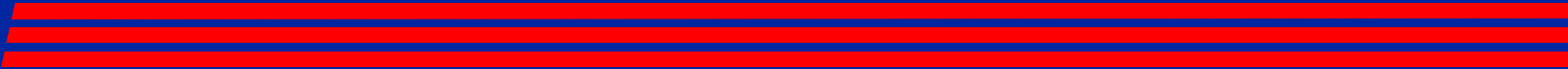
Different tests (DNA, mRNA)

- **Primary screening ± cytology**
- **Follow-up low-grade lesions**
- **Follow-up high-grade lesions after treatment**






Treatment of high-risk HPV patients?

- HPV infection with severe cytological abnormalities!
 - HPV infection with mild cytological abnormalities?
 - HPV infection without cytological abnormalities?
- 




”state of today”

- **HPV infection increases**
 - **Precursors are frequent**
 - **Surgery has side effects**
 - **Alternative treatments are needed**
- 




The fight against cervical cancer: Development

- "Observation of natural course"
 - Therapy and
 - Secondary prophylaxis
 - **Primary prophylaxis (vaccination)??**
- 



HPV vaccines - types: Published studies

- Monovalent (HPV 16) Koutsky NEJM 2002
- Bivalent #(HPV 16/18) Harper Lancet 2004/6
- Quadrivalent* (6, 11, 16, 18) Villa LL Lancet 2005

- *Commerciably available (Gardasil)
 - # Cervarix
 - Polyvalent (> 4) ??
- 




HPV type and proportion of lesions: **(Gardasil HPV 6/11/16/18, Cervarix HPV 16/18)**

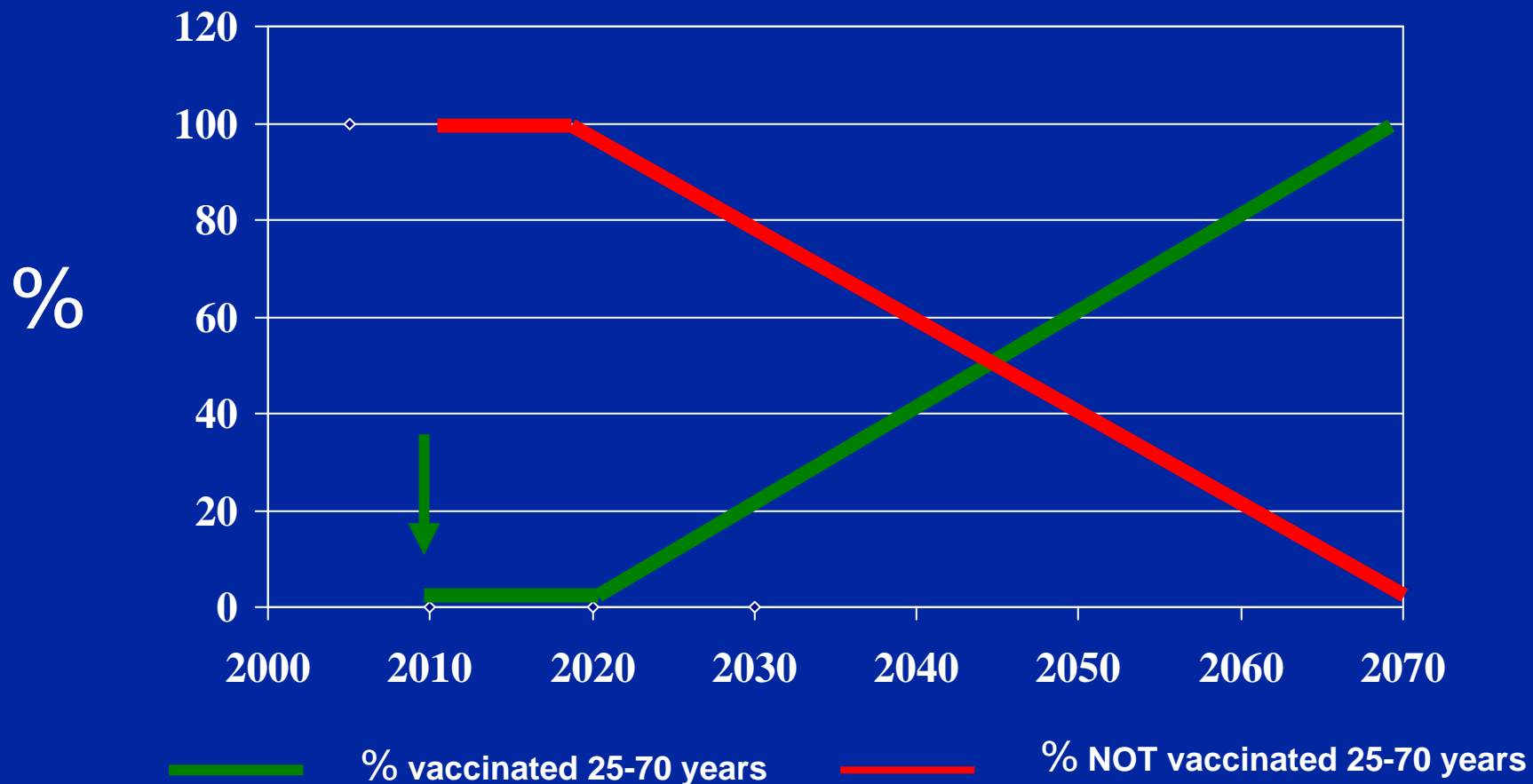
HPV 6/11

- **>90% of genital warts^{2a}**
- **~10% of low-grade cervical lesions^{3b}**

HPV 16/18


- **~25% of low-grade cervical lesions^{3b}**
 - **~50% of high-grade cervical lesions^{4c}**
 - **~70% of cervical cancer^{3b,5d,6e}**
- 

Scenario if vaccination starts 2010 of all girls at 15 years: cumulative proportion vaccinated





Treatment for HPV infections

- **Precursors**
Conisation, but with side effects
 - **Mild abnormalities**
No treatment available
 - **Large HPV infected population**
 - **Vaccination effect in the far future**
- 



Thank you for your attention



This document was created with Win2PDF available at <http://www.win2pdf.com>.
The unregistered version of Win2PDF is for evaluation or non-commercial use only.