Croatia and the EU:
Together
Against Cancer

IMPROVEMENT OF QUALITY OF THE NATIONAL CANCER SCREENING PROGRAMMES IMPLEMENTATION (CRO SCREENING)

MINISTRY OF HEALTH OF THE REPUBLIC OF LITHUANIA

NCI

LITHUANIAN UNIVERSITY OF HEALTH SCIENCES

CPVA

NIJZ
Nacionalni institut za javno zdravje

Ministry of Health

HZJZ

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Capabilities of HPV testing in screening

Dr. Astra Vitkauskiene (Lithuania)

Validation for HPV Test: Practice Guidelines

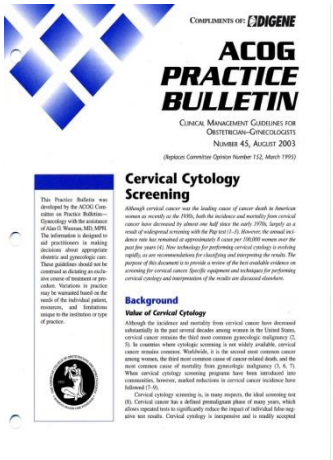
Clinical Practice Guidelines:

ACOG

ACS

ASCCP

ARHP



ASCCP

AMERICAN SOCIETY FOR COLPOSCOPY AND CERVICAL PATHOLOGY

The society for lower genital tract disease since 1964

"...revolutionizing our approaches to screening and prevention."

New England Journal of Medicine

"...HPV DNA testing is more sensitive than cervical cytology in detecting CIN2/3…"

ACOG Practice Bulletin – No. 63, April 2005

Cervical Cancer Screening Guidelines for Average-Risk Women[a]

		American Cancer Society (ACS), American Society for Colposcopy and Cervical Pathology (ASCCP), and American Society for Clinical Pathology (ASCP)[1] 2012	U.S. Preventive Services Task Force (USPSTF)[2] 2012	American College of Obstetricians and Gynecologists (ACOG)[3] 2012	Society of Gynecologic Oncology (SGO) and the American Society for Colposcopy and Cervical Pathology (ASCCP): Interim clinical guidance for primary hrHPV testing[4] 2015
Screening method and intervals					
Cytology (conventional or liquid based)[c]	21–29 years of age	Every 3 years.[d]	Every 3 years *(A recommendation)*.	Every 3 years *(A recommendation)*.	Not addressed.
	30–65 years of age	Every 3 years.[d]	Every 3 years *(A recommendation)*.	Every 3 years *(A recommendation)*.	Not addressed.
HPV co-test (cytology + HPV test administered together)	21–29 years of age	HPV co-testing should not be used for women aged <30 years.	Recommend against HPV co-testing in women aged <30 years *(D recommendation)*.	HPV co-testing[e] should not be performed in women aged <30 years. *(Level A evidence)*	Not addressed.
	30–65 years of age	Every 5 years; this is the preferred method.	For women who want to extend their screening interval, HPV co-testing every 5 years is an option *(A recommendation)*.	Every 5 years; this is the preferred method *(Level A evidence)*.	Not addressed.
Primary hrHPV testing[f] (as an alternative to cotesting or cytology alone)[g]		For women aged 30–65 years, screening by HPV testing alone is not recommended in most clinical settings.[h]	Recommend against screening for cervical cancer with HPV testing (alone or in combination with cytology) in women aged <30 years *(D recommendation)*.	Not addressed.	Every 3 years. Recommend against primary hrHPV screening in women aged <25 years of age.[i]

Can HPV testing be used alone for cervical cancer screening?

- On April 24, 2014, the Food and Drug Administration (FDA) approved the use of one HPV DNA test (cobas HPV test, Roche Molecular Systems, Inc.) as a first-line primary screening test for use alone for women age 25 and older.

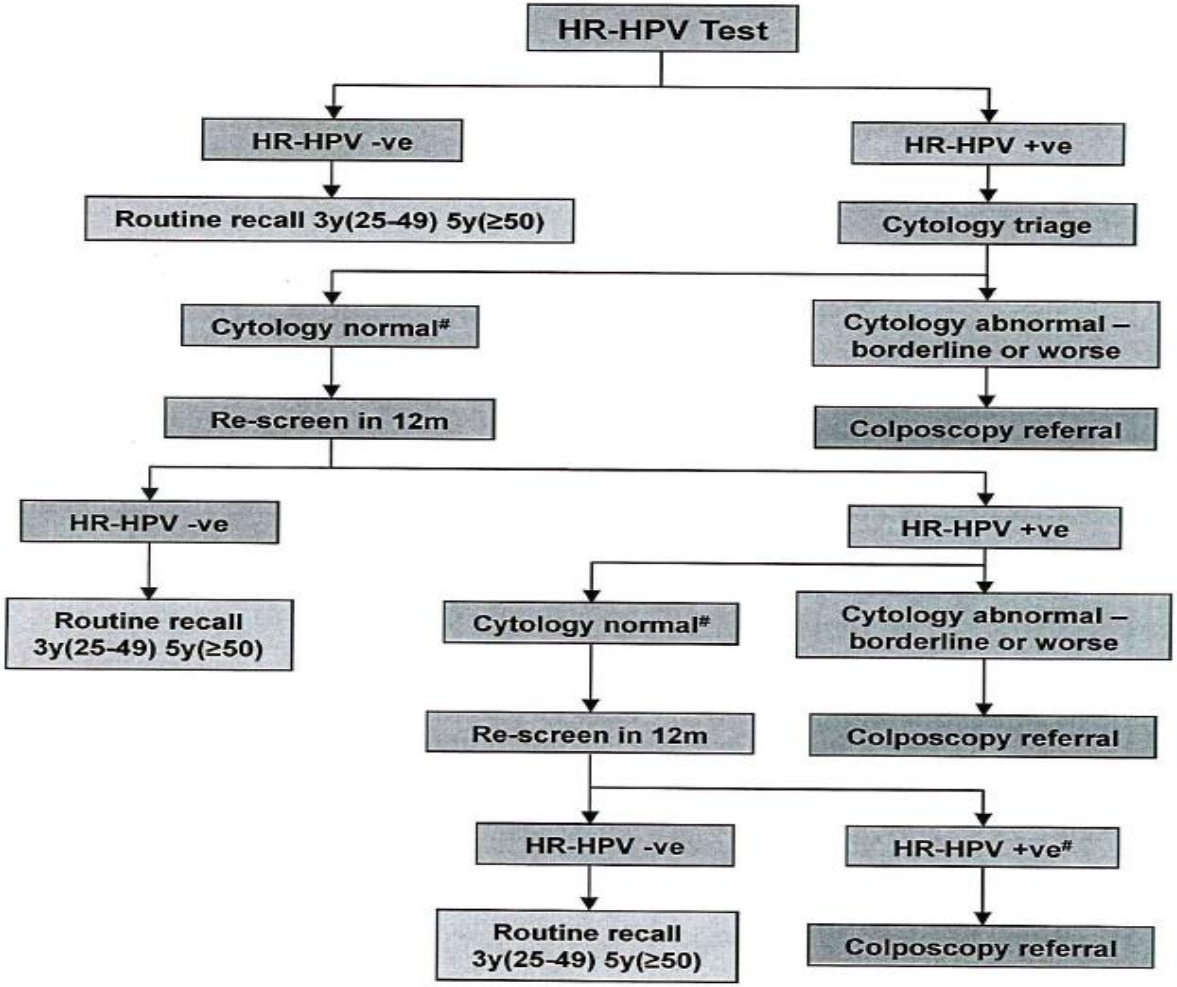
- This test detects each of HPV types 16 and 18 and gives pooled results for 12 additional high-risk HPV types.

Public Health England

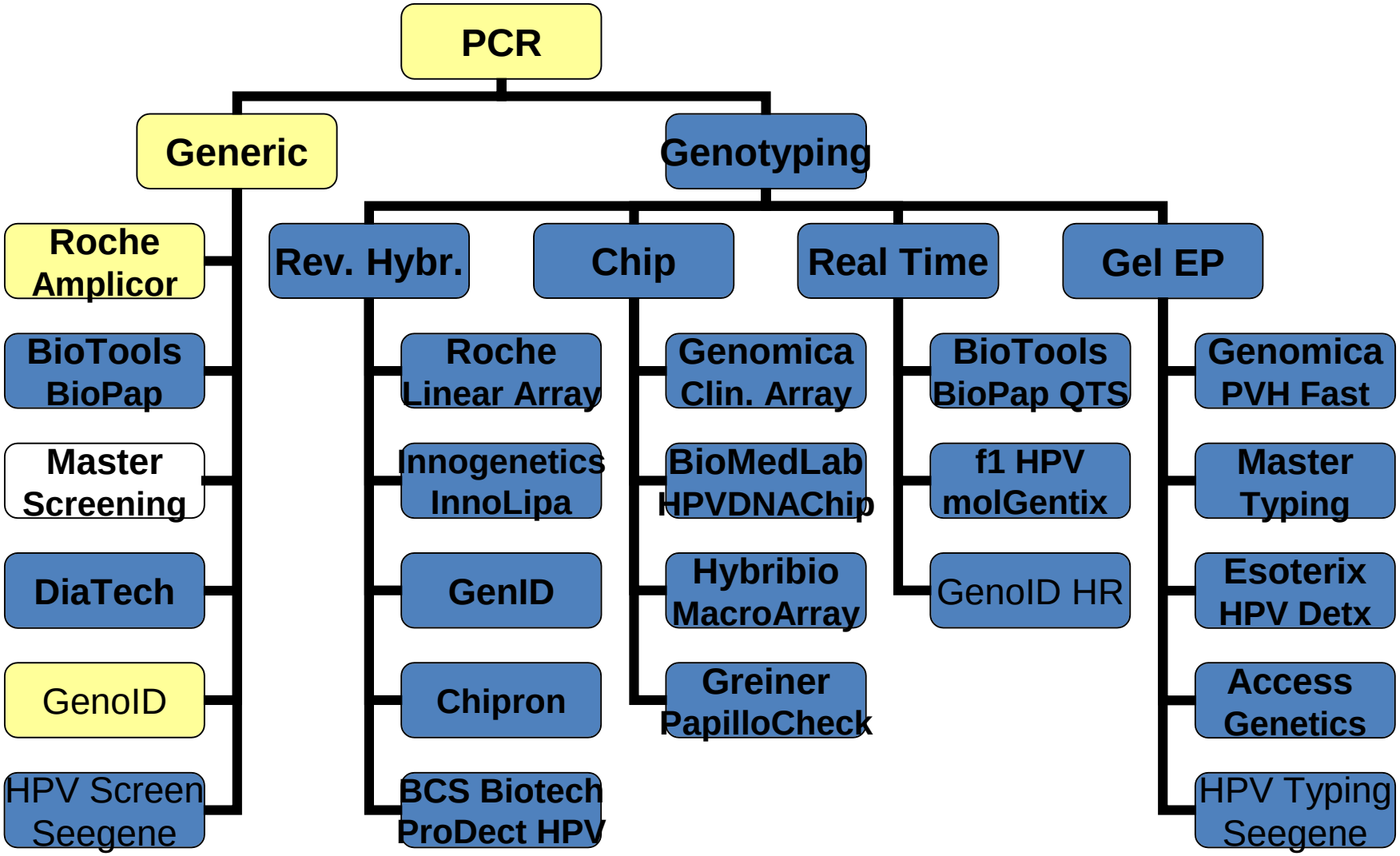
NHS Cancer Screening Programmes

HPV Primary Screening Protocol Algorithm

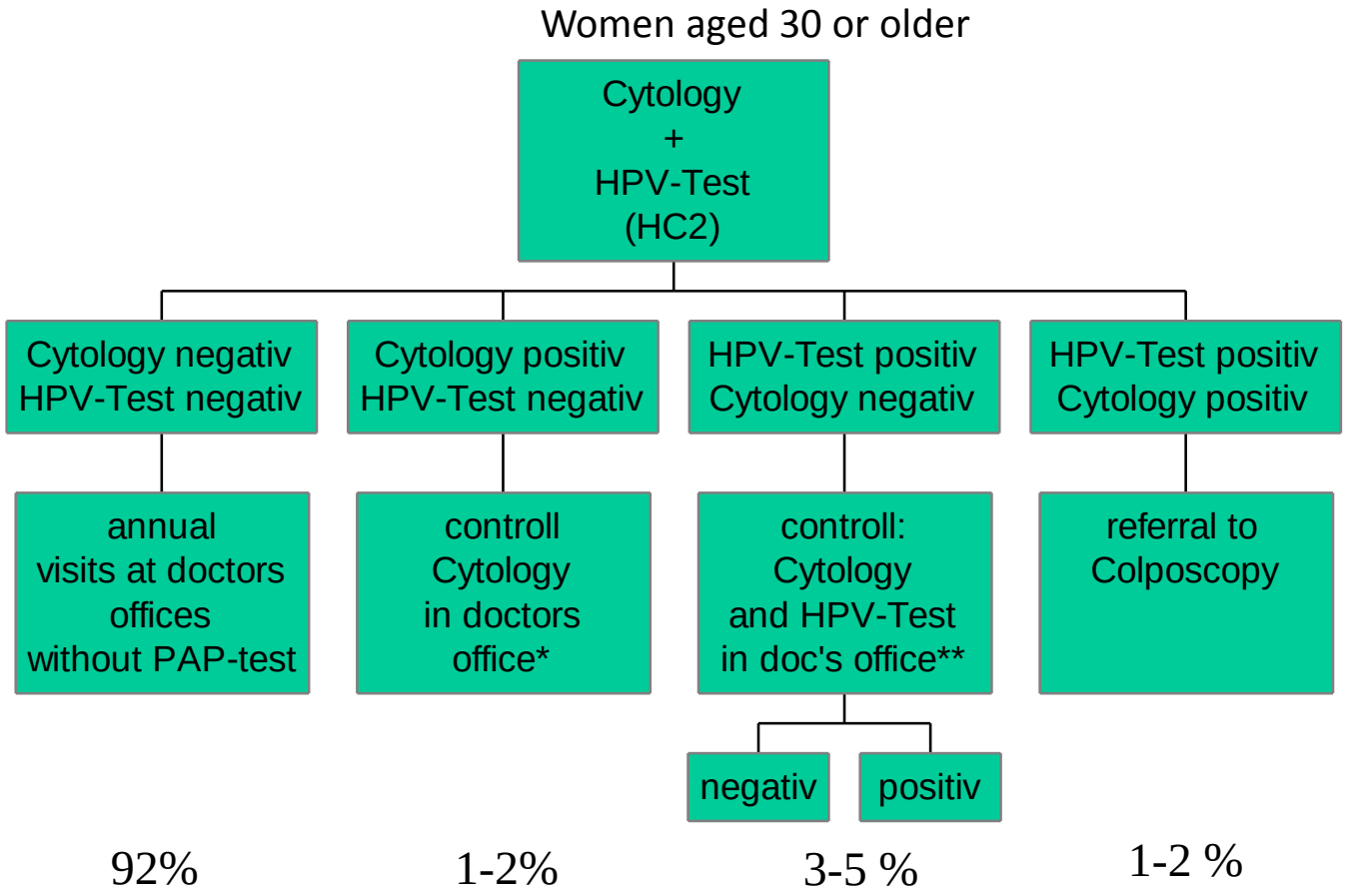
All women aged 25-64 on routine call/recall and early recall



Screening Approach



Wolfsburger Modell of Cancer Prevention



*) PAP IVa + HPV+: immediate ref. to colposcopy, for recurrent Pap IIw/III/IIId also

**)Alternative for patients HPV+: immediate ref. to colposcopy

Primary Screening – Sensitivity CIN2+

Study	No. Women	Age	Cytology	HPV
J. Cuzick	*11.085*	*30-60*	*76,6 %*	*97,1%*
C. Clavel	*7.932*	*30-76*	*57,7%CC* *84,4%LBC*	*100%*
K. U. Petry	*7.908*	*30-60+*	*43,5%*	*97,8%*

(*J. Cuzick et al., Lancet 2003; 362:1871-1876,*
C. Clavel et al., Brit. J. Cancer 2001; 84:1616-1623,
K. U. Petry et al., Brit. J. Cancer 2003; 88:1570-1577)

Primary Screening – Specificity CIN2+

Study	No. Women	Age	Cytology	HPV
J. Cuzick	*11.085*	*30-60*	*95,8%*	*93,3%*
C. Clavel	*7.932*	*30-76*	*95,6%^{CC}* *94,8%^{LBC}*	*90,1%*
K. U. Petry	*7.908*	*30-60+*	*98,0%*	*95,3%*

(*J. Cuzick et al., Lancet 2003; 362:1871-1876,*
C. Clavel et al., Brit. J. Cancer 2001; 84:1616-1623,
K. U. Petry et al., Brit. J. Cancer 2003; 88:1570-1577)

Meta-analysis of European hc2 Trials (Cuzick et al.)

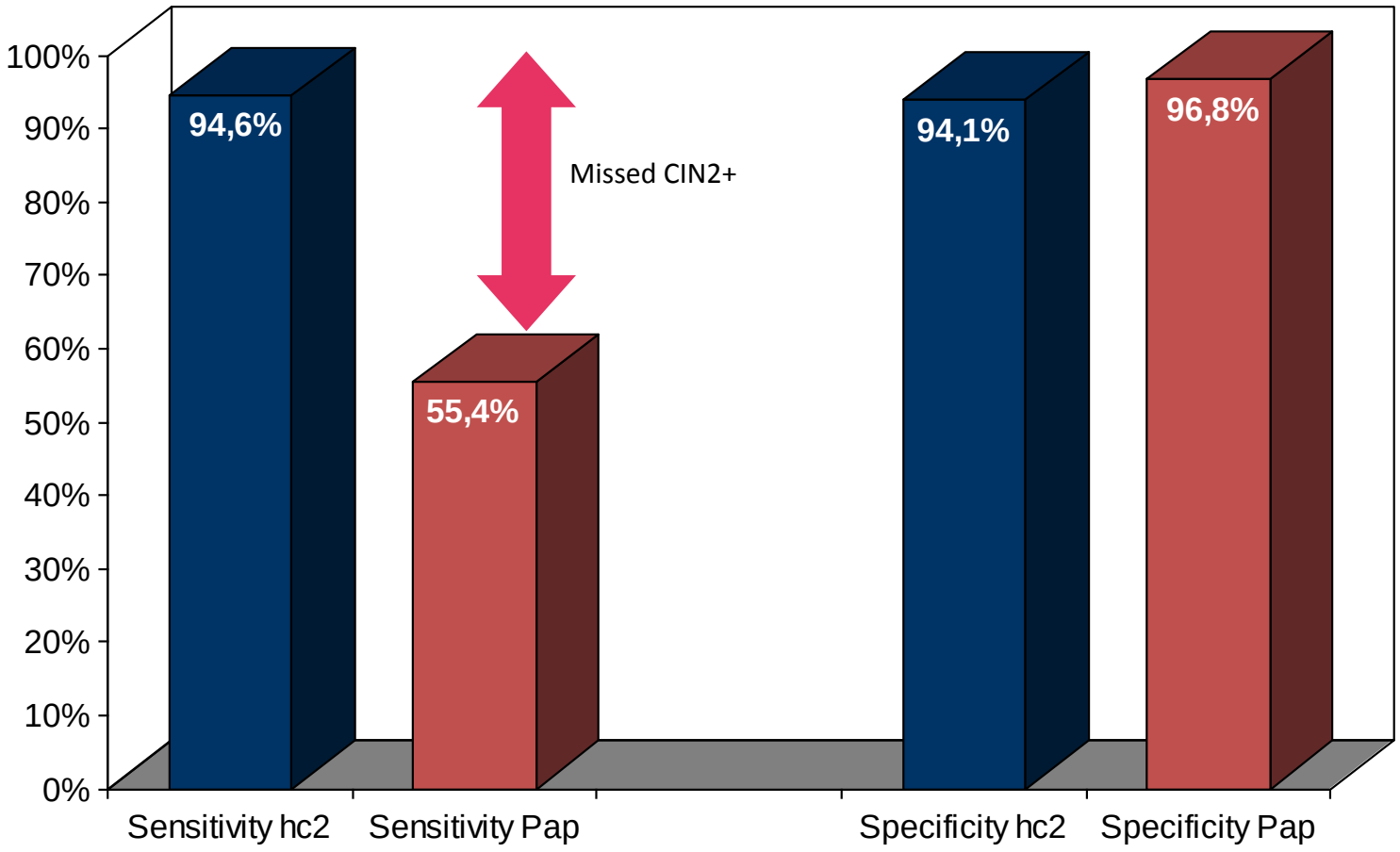
Sensitivity of hc2 and cytology for CIN2+

	France	**UK**	**Germany**	**All**
hc2	100%	97.7%	97.8%	**98.6%**
Cytology	68.1-87.9%	83.1%	43.5%	**71.4%**
Both Tests	100%	100%	100%	**100%**

Specificity: *digene* HPV hc2 test 92.5%, Cytology 96.2%

Comparison of *digene* HPV hc2 Test to Pap Test

N. Eng. J. Med. 2007: Canadian Cervical Cancer Screening Trial (CCCaST)



- 10.154 women tested: 5095 in hc2 group / 5059 in Pap group
- 19/20 cases detected in hc2 group
- 12/21 cases detected in Pap group

(M. H. Mayrand et al., N. Engl. J. Med. 2007; 357: 1579-1588)

HPV Test As Primary Screening Test: Results And Conclusion

- HPV test detects more CIN2+/CIN3+ lesions in the first screening round
  than cytology , but less in the second round, due to earlier detection.

- Total no. of CIN2+/CIN3+ lesions over 2 screening round is the same. This implies that *earlier* detected lesions are *non-regressing* lesions and
  thus *clinically relevant.*

- Compared to cytology HPV DNA testing decreases:
- the 5 yrs. interval risk of CIN2+ from 1.1% to 0.5% and
- the 5 yrs. interval risk of CIN3+ from 0.8% to 0.2%.
- This permits extension of screening interval.

(N.W.J. Bulkmans et al., Lancet 2007; 370: 1.764-1.772)

First round: HPV+ Cytology
vs. Conventional Cytology
Second Round (Endpoint): HPV + Cytology In Both Arms

Do women who have been vaccinated against HPV still need to be screened for cervical cancer?

- Yes.
- Because current HPV vaccines do not protect against all HPV types that cause cervical cancer, it is important for vaccinated women to continue to undergo routine cervical cancer screening.