

Alternativas para el tamizaje del cáncer cervico uterino .

Dr. José Jerónimo

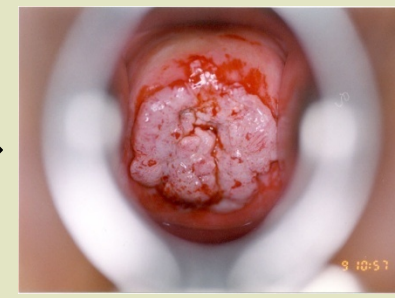
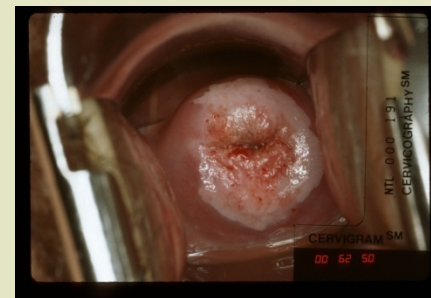
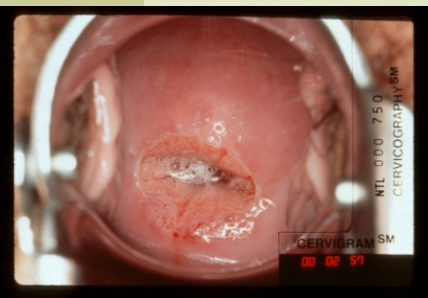
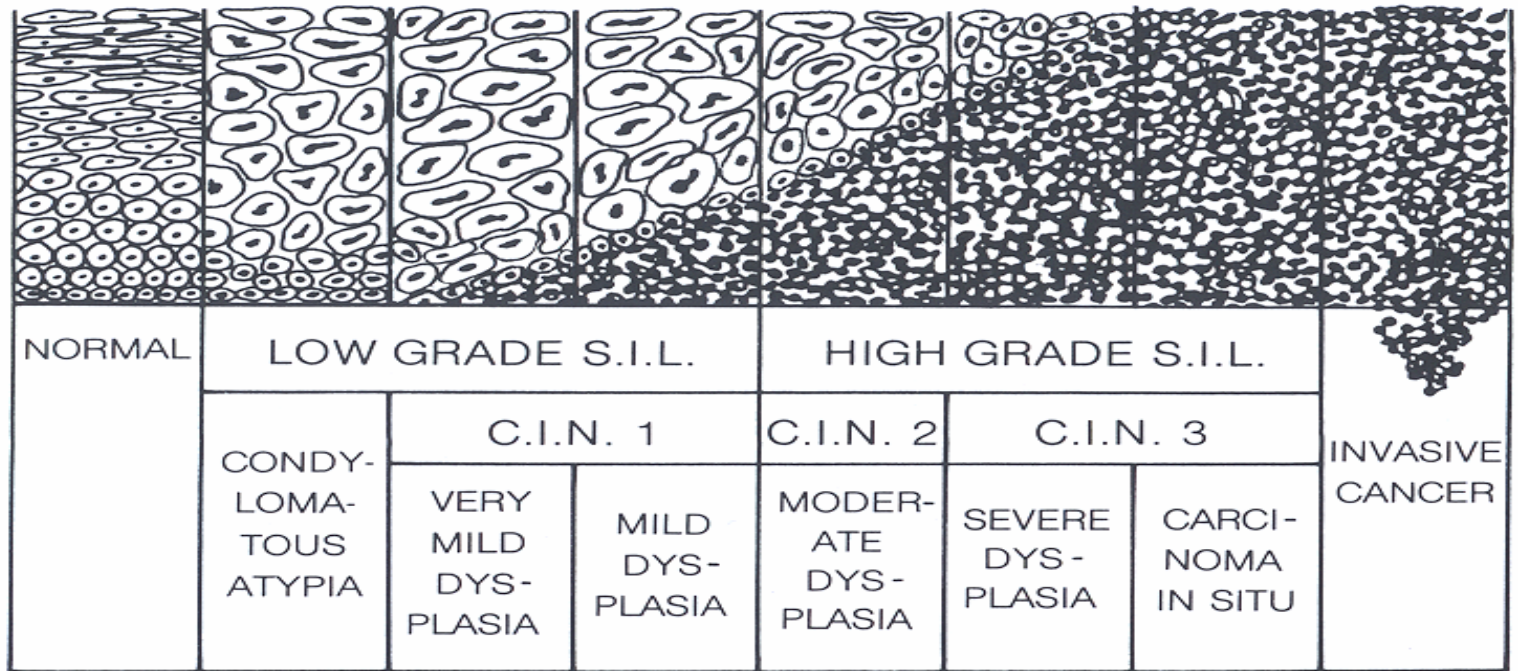
Senior Advisor Women's Cancers

PATH, Seattle, USA

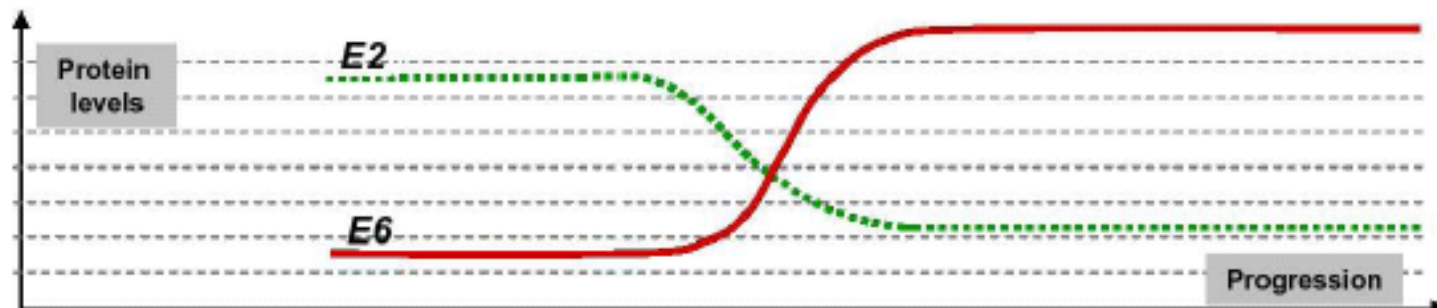
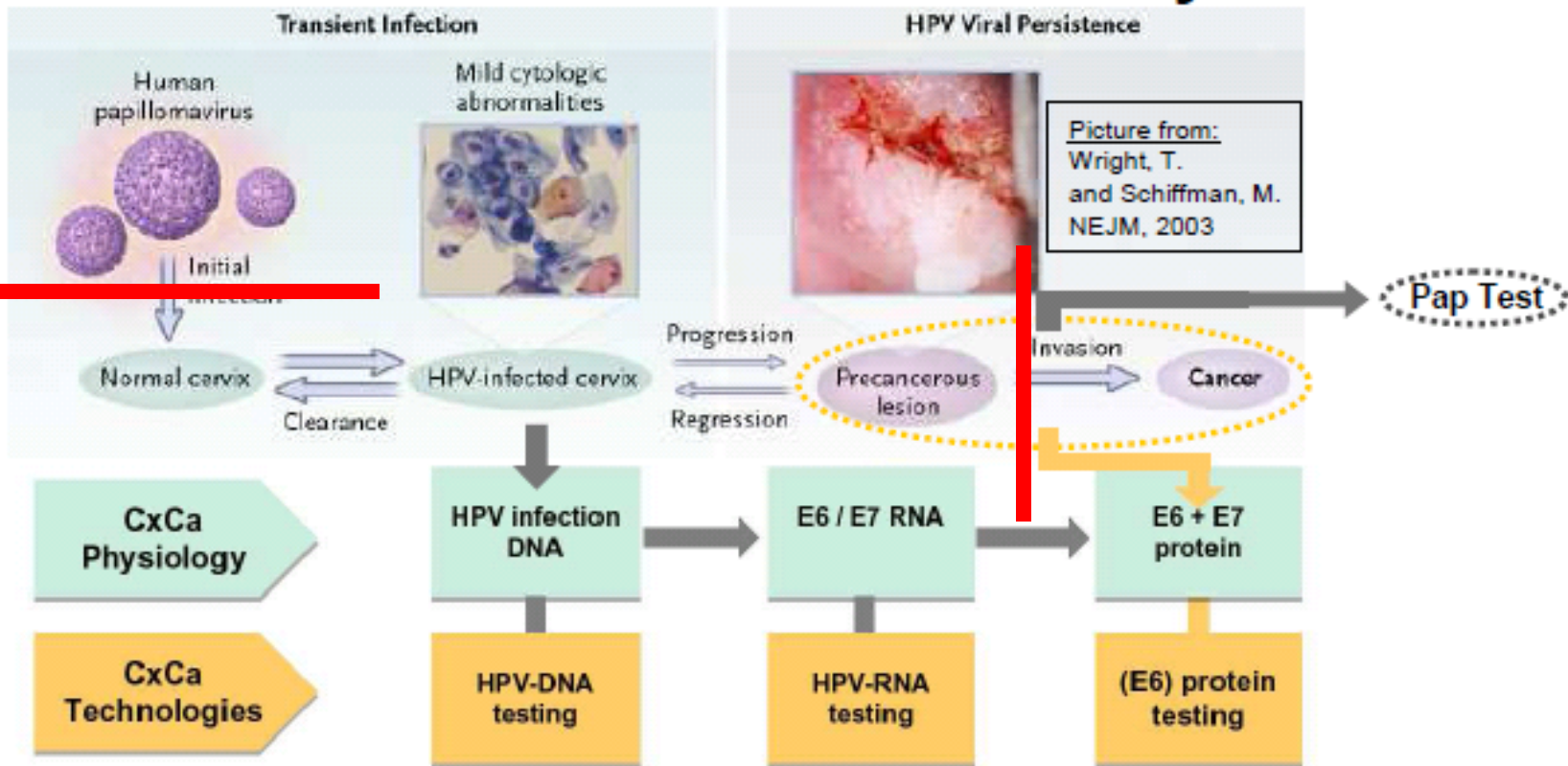


Surface of epithelium

Basal epithelium

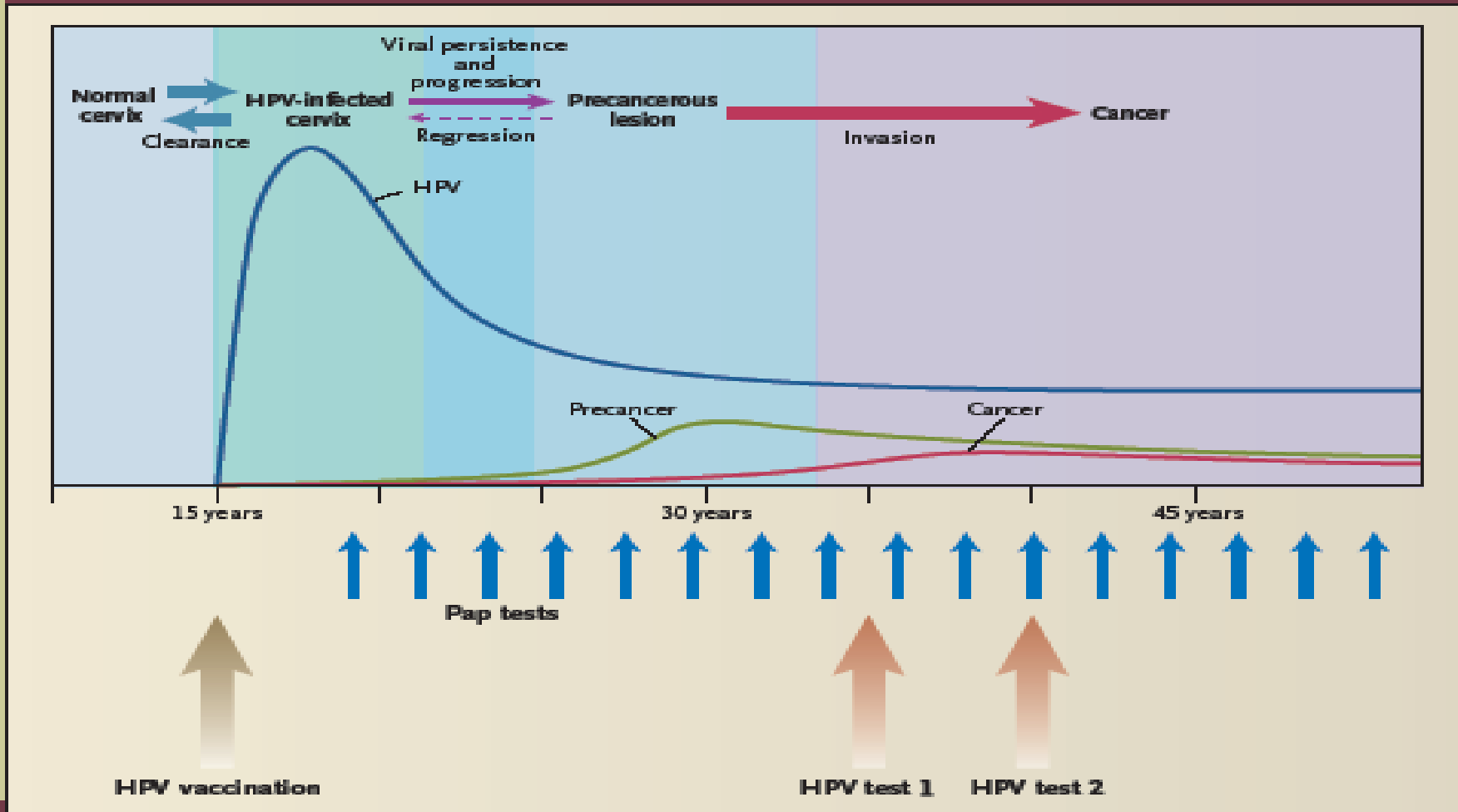


Cervical Cancer and Natural History of HPV



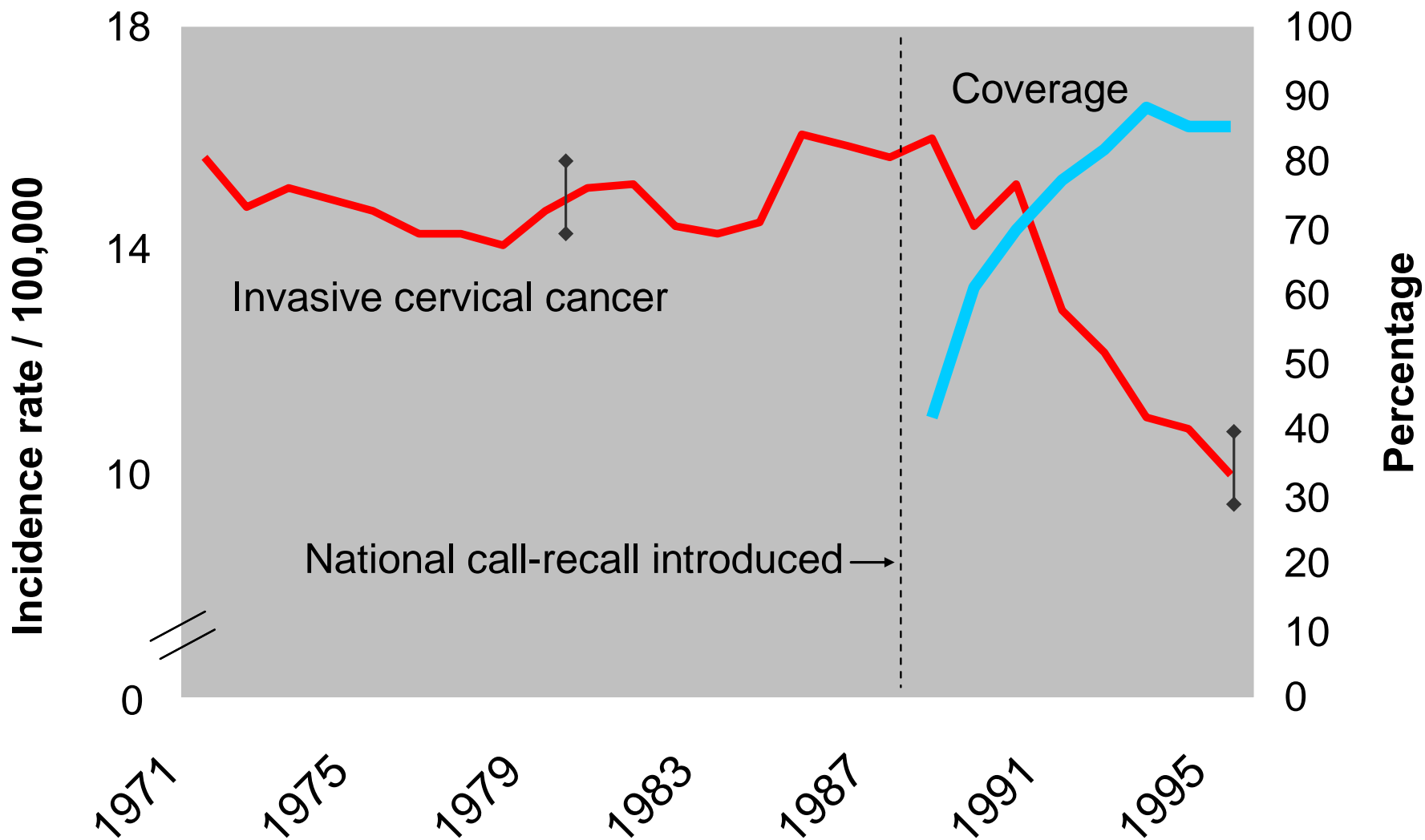
CIN1 >> CIN2 >> CIN3 >>>>>>>>> CxCa

Historia natural de infección de VPH



El Papanicolaou (Pap) ha reducido significativamente la incidencia de cáncer cervical en poblaciones donde ha sido bien implementado





Cervical cancer incidence: England 1971-1995

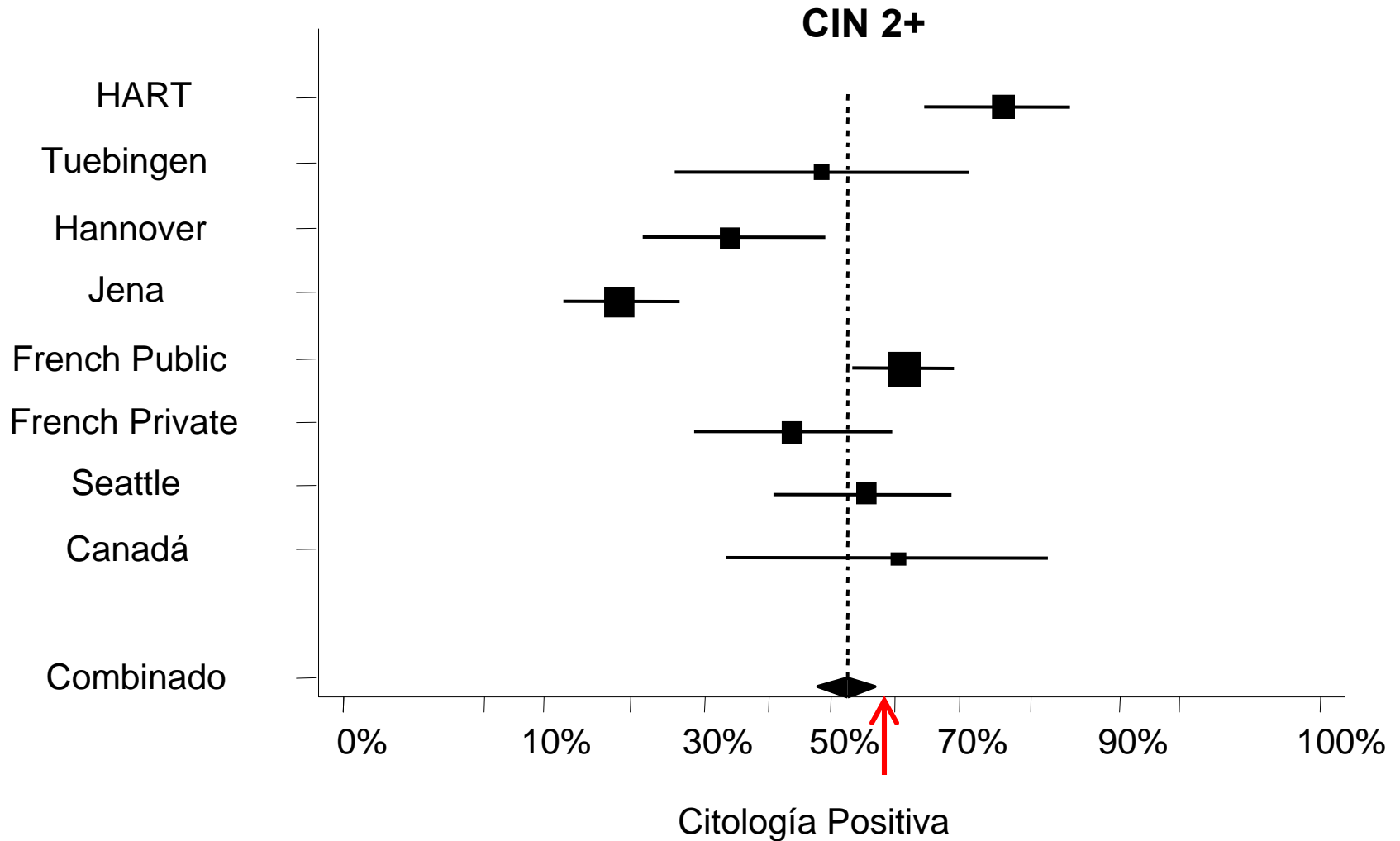
Quinn M, Babb P, Jones J, Allen E. Effect of screening on incidence of and mortality from cancer of cervix in England: evaluation based on routinely collected statistics. *The British Medical Journal*. 1999; 318:904.



% Citología Positiva: CIN2+

Cuzick *et al.*, IJC, 2006

Mayrand *et al.*, NEJM, 2007



Sensibilidad Pap Convencional

	Sensibilidad	Especificidad
Peru 2000 (ProyectoTATI)	33.6	98.7
Nicaragua Start-Up 2012	37.2	95.3
Hyderabad (Patologo 1)	81.1	
Hyderabad (Patologo 2)	20.8	
Uganda	60.0	53.5
Chile	<30	



Otros métodos propuestos.

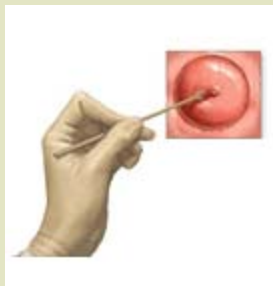
Inspección Visual con Acido Acético (VIA)



Inspección Visual con Lugol (VILI)



Citología en base líquida



Hybrid Capture[®] 2 (hc2, QIAGEN Corporation, Gaithersburg, MD)



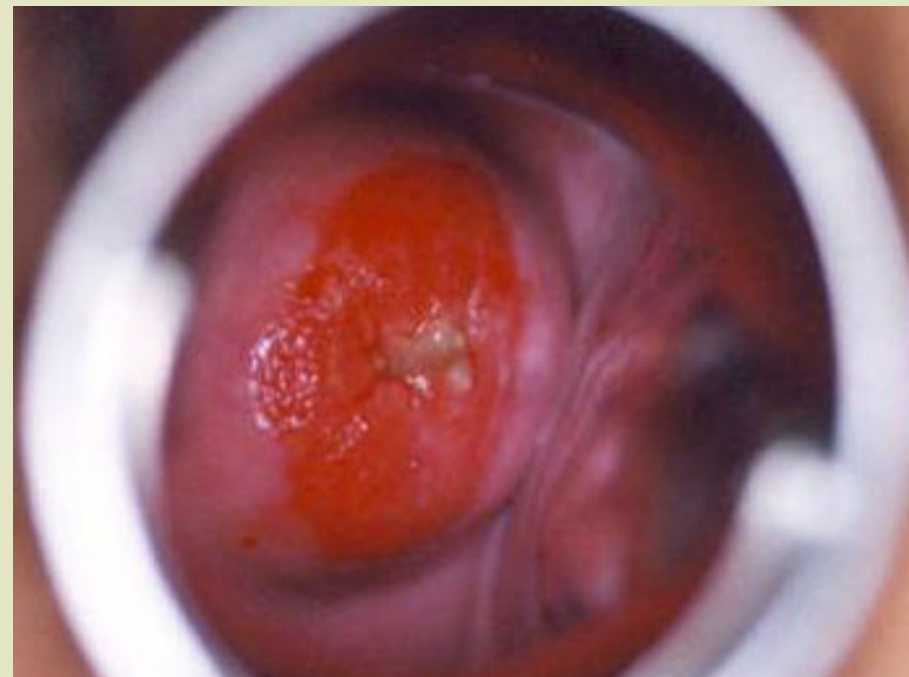
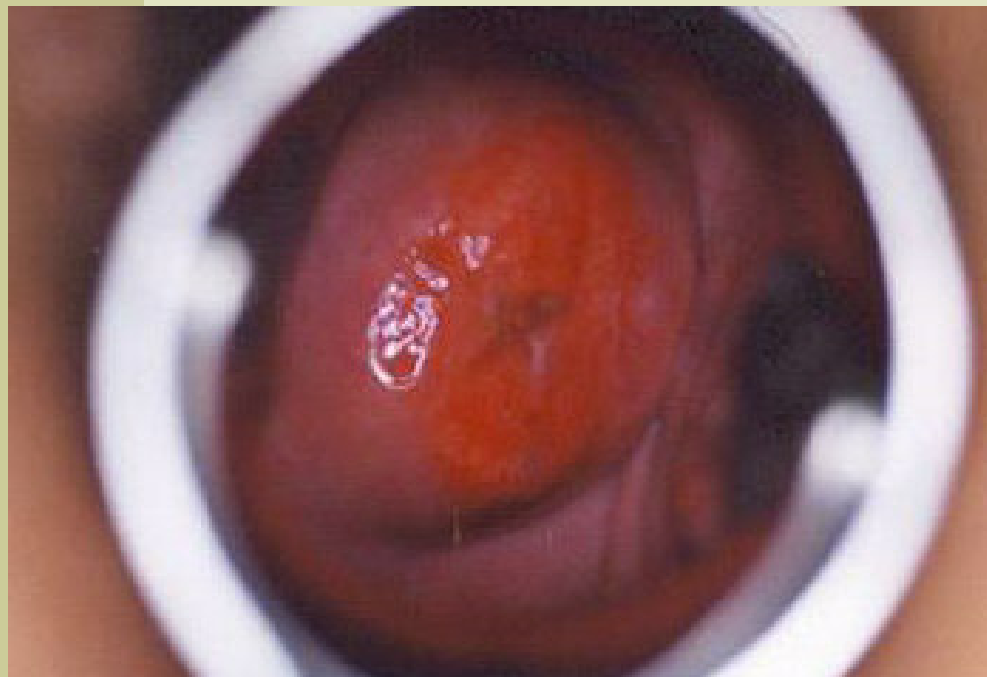
1982

- Ottaviano - La Torre
 - 2400 pacientes.
 - IVAA detecto 98% de lesiones

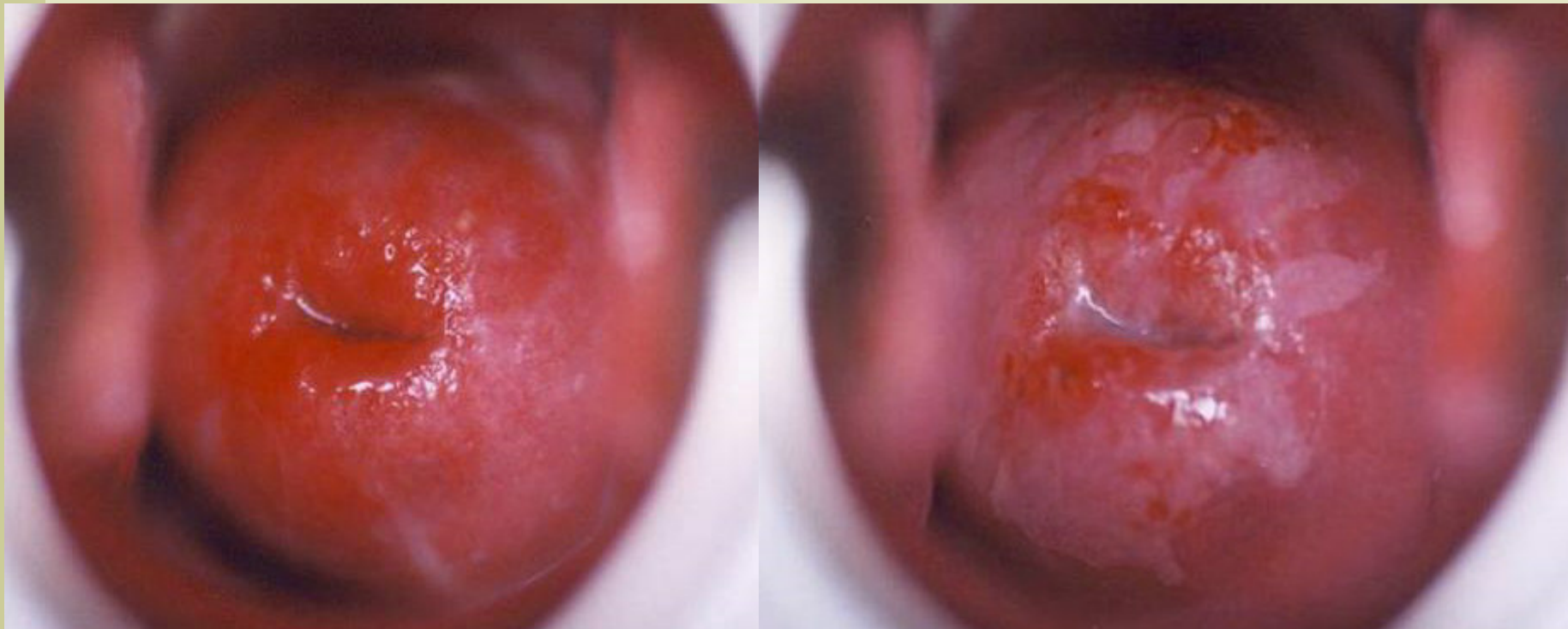
“ La magnificación colposcópica no es esencial para el estudio del cuello en riesgo”



Inspección Visual Negativa



Inspección Visual Positiva



IVAA: el mayor reto es la falta de magnificación.



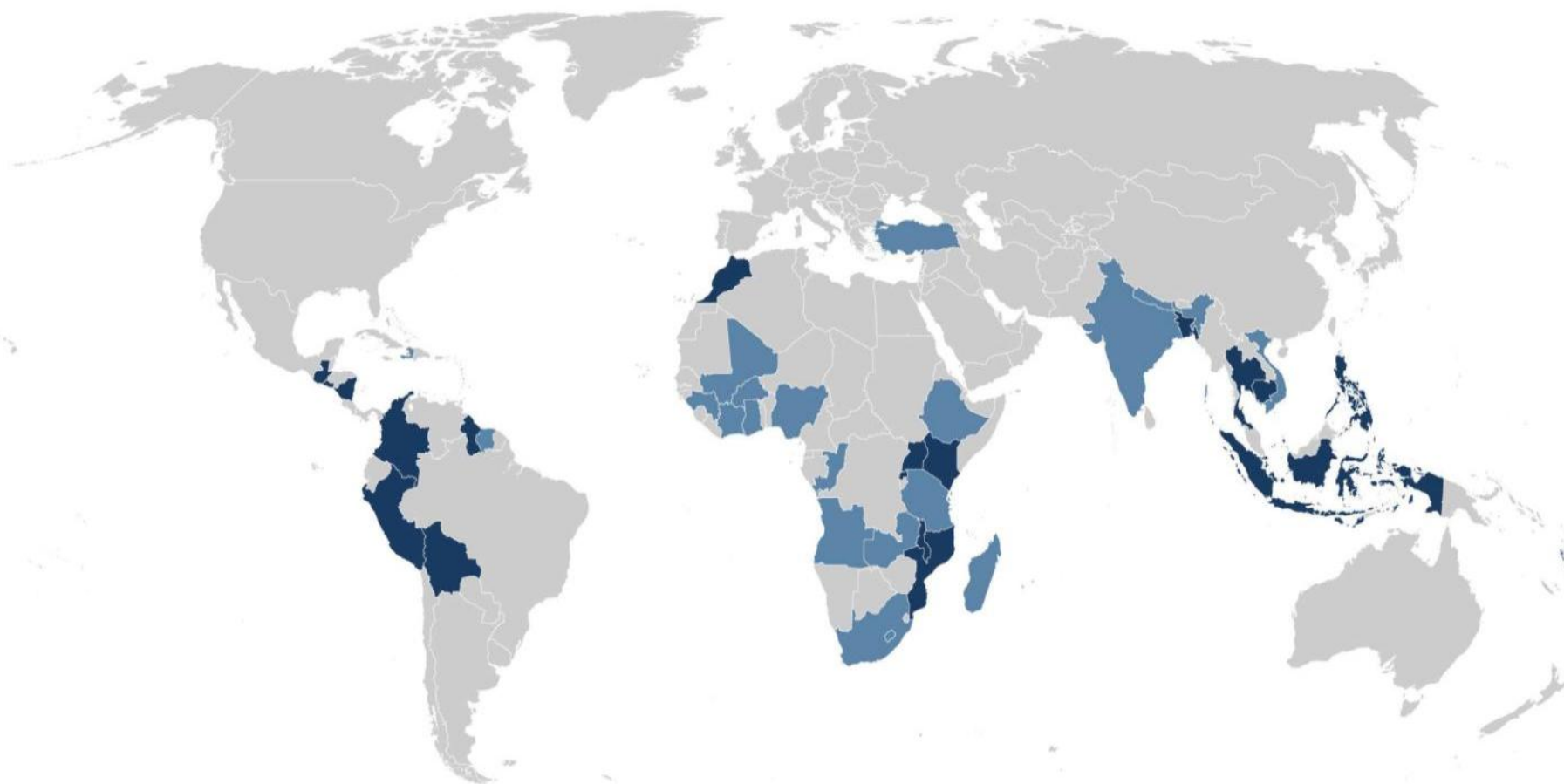
IVAA

- **Técnica sencilla, no invasiva y relativamente económica.**
- **No requiere equipo especial.**
- **Resultados inmediatos.**
- **Sensibilidad similar a la citología.**
- **Minoría de positivos tienen NIC2+.**



2.1 INTRODUCTION OF VISUAL INSPECTION (VIA) FOR CERVICAL CANCER SCREENING

STATUS: END OF 2010



■ **NATIONAL PROGRAMS:** VISUAL INSPECTION IN THE NATIONAL SCREENING NORMS AND AVAILABLE ON A LIMITED OR UNIVERSAL BASIS THROUGH THE PUBLIC SECTOR

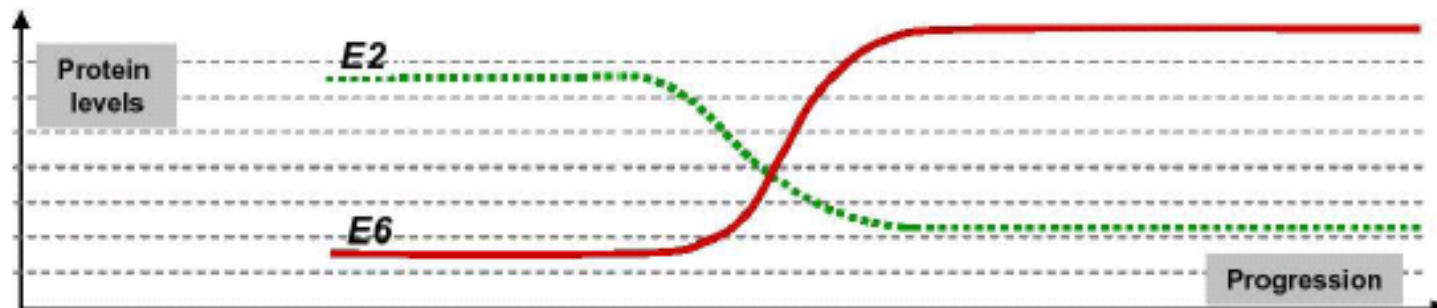
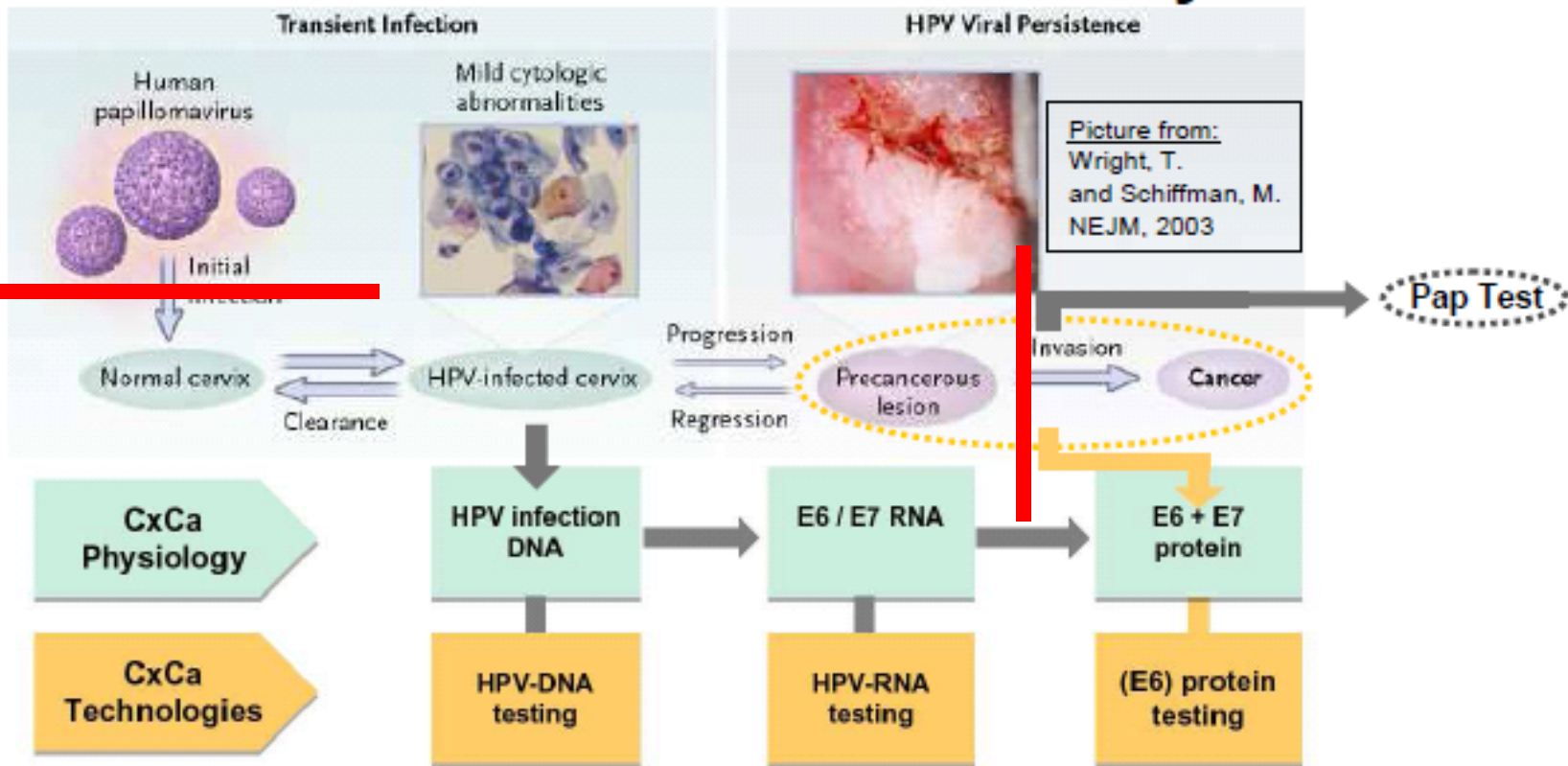
■ **PILOT PROGRAMS:** VISUAL INSPECTION AVAILABLE THROUGH PILOT OR DEMONSTRATION PROJECTS ORGANIZED BY THE MINISTRY OF HEALTH OR NGO PARTNERS

■ **NO VIA PROGRAM**

**Reference: Cervical Cancer Action
2011.**

The information represented here has been collected through interviews with individuals and organizations involved with the countries represented and has not been verified with individual Ministries of Health. Any oversights or inaccuracies are unintentional.

Cervical Cancer and Natural History of HPV

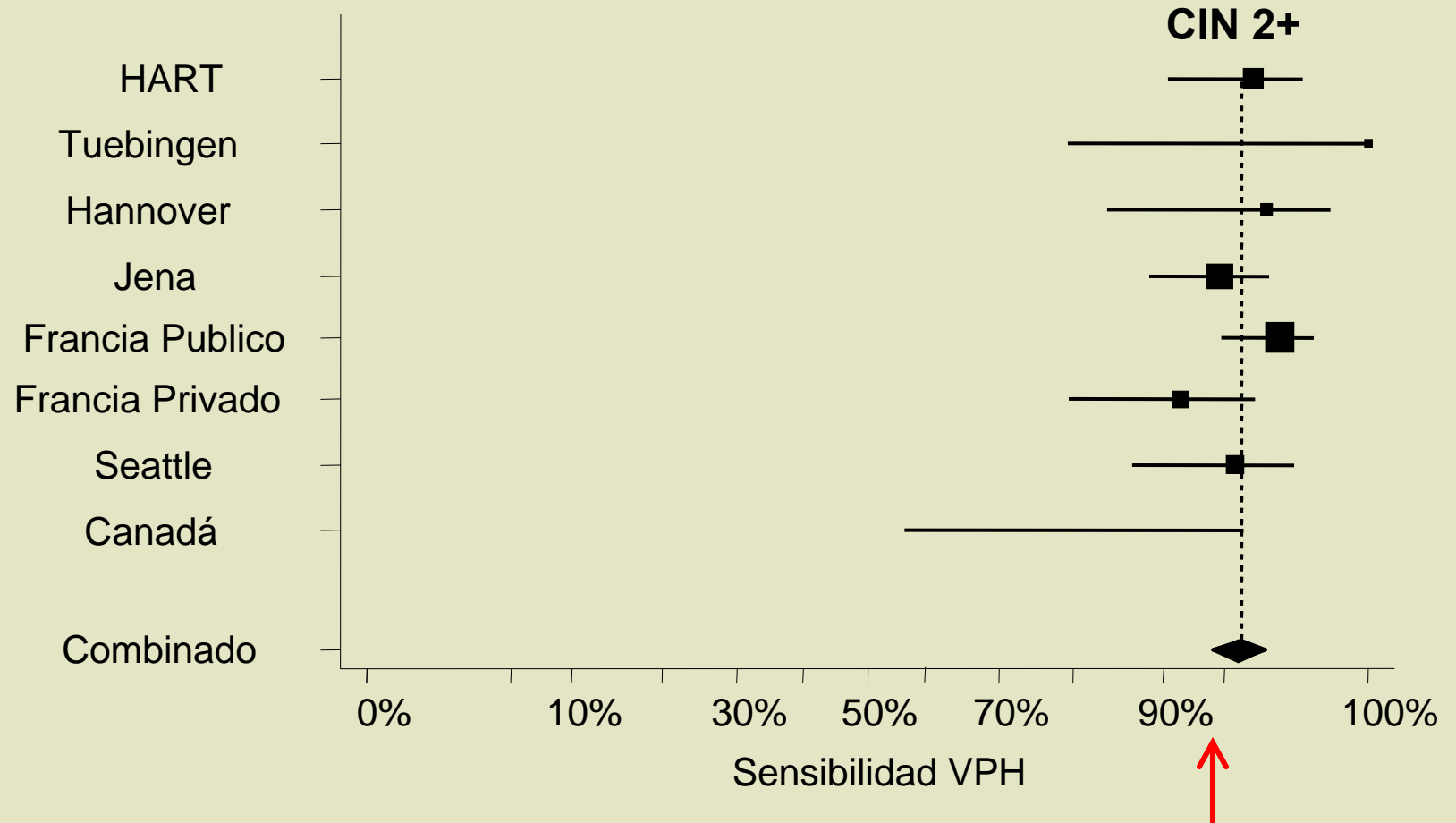


CIN1 >> CIN2 >> CIN3 >>>>>>>> CxCa

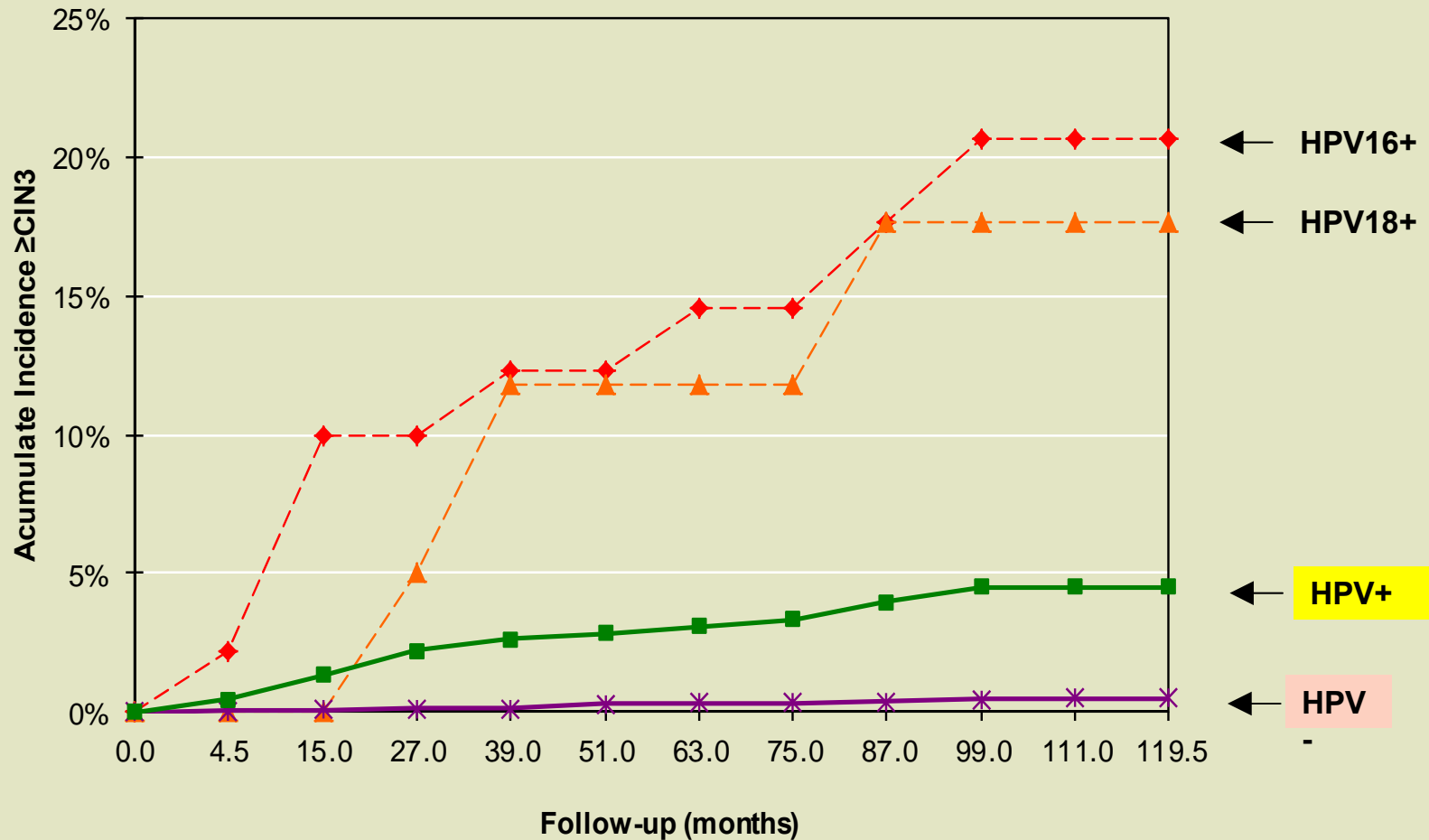
Sensibilidad de la prueba HPV: NIC2+

Cuzick *et al.*, IJC, 2006

Mayrand *et al.*, NEJM, 2007



Valor predictivo de la prueba de HPV



Khan M, Castle PE, Lorincz AT, et al. The Elevated 10-Year Risk of Cervical Precancer and Cancer in Women With Human Papillomavirus (HPV) Type 16 or 18 and the Possible Utility of Type-Specific HPV Testing in Clinical Practice. *Journal of the National Cancer Institute*. 2005;97(14):1072-1079.

Castle PE, Sideri M, Jeronimo J. Risk assessment to guide the prevention of cervical cancer. *American Journal of Obstetrics & Gynecology*. 2007;197(4):356.e1-356.e6.



HPV-DNA testing



hc2



careHPV Test



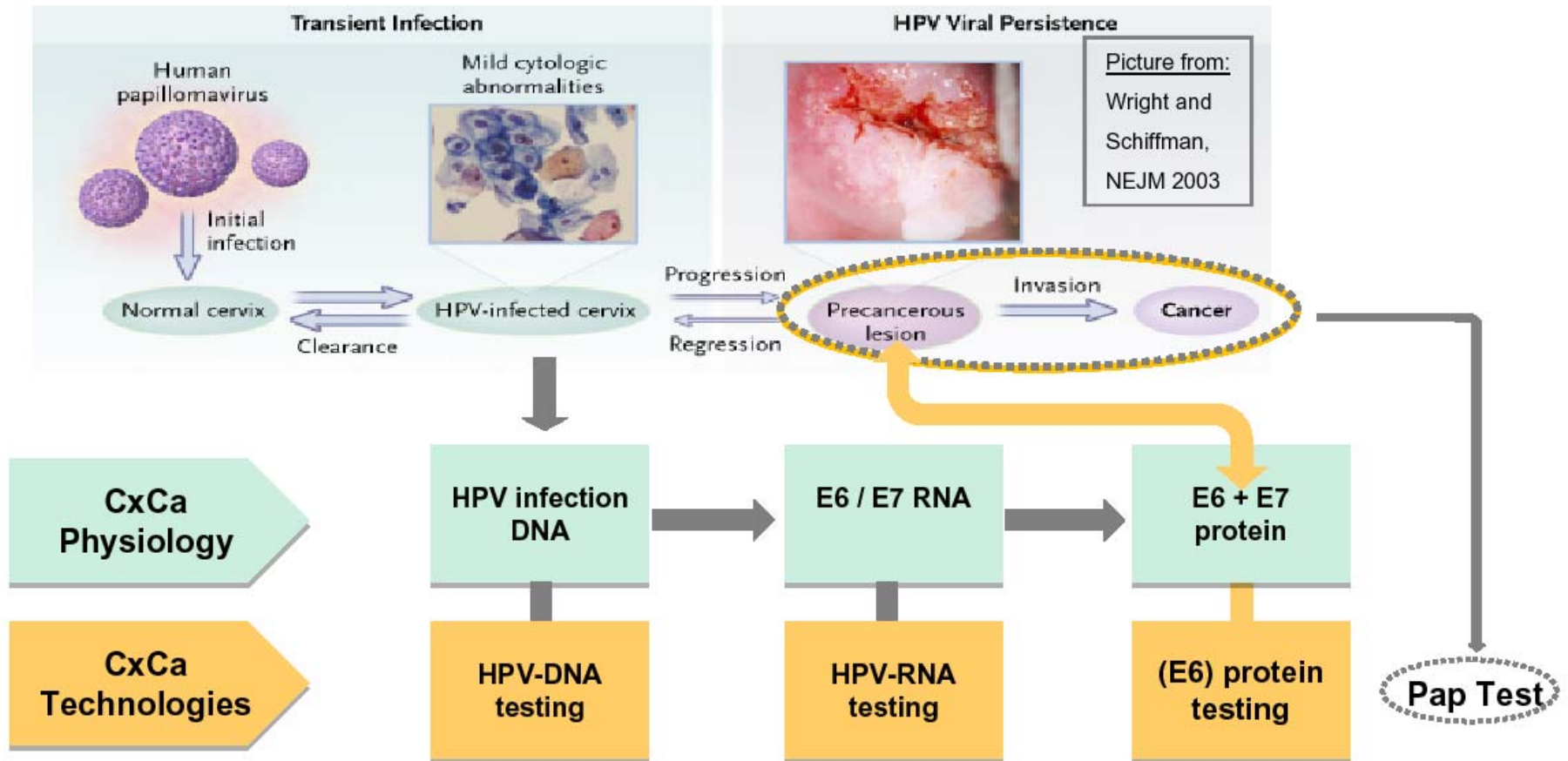
Sensibilidad y especificidad para CIN2+*

Metodo de Tamizaje	Sensibilidad (95% CI)	Especificidad (95% CI)
Cervical <i>careHPV</i> TM	85.0% (80.0, 89.2)	89.3% (88.7, 89.8)
Vaginal <i>careHPV</i> TM	73.2% (67.3, 78.6)	88.3% (87.7, 88.8)
VIA	64.6% (58.3, 70.4)	80.2% (79.5, 80.9)
Pap (ASCUS+)	60.2% (53.9, 66.3)	83.9% (83.3, 84.6)

- Estimates based on 254 cases of CIN2+
- Excluyendo Delhi



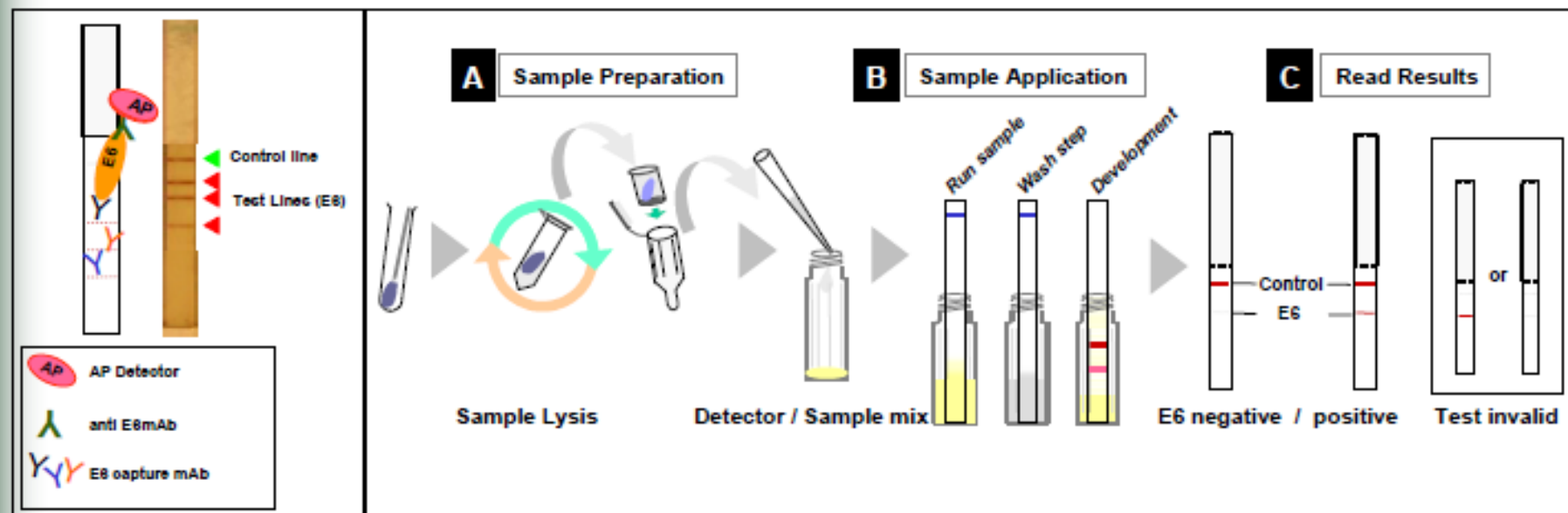
E6 test



- E6 Oncoprotein is a marker oncogenic changes



AV Advantage HPV E6 Test Format & Workflow

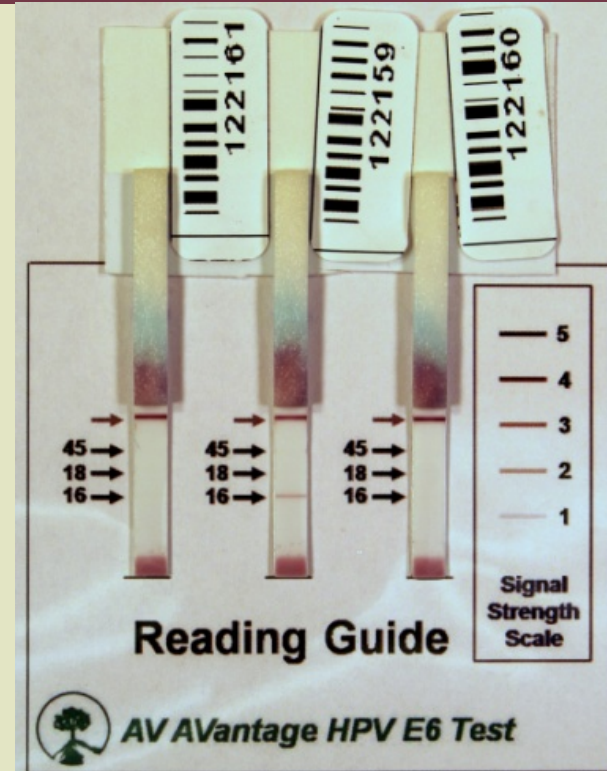


Comment:

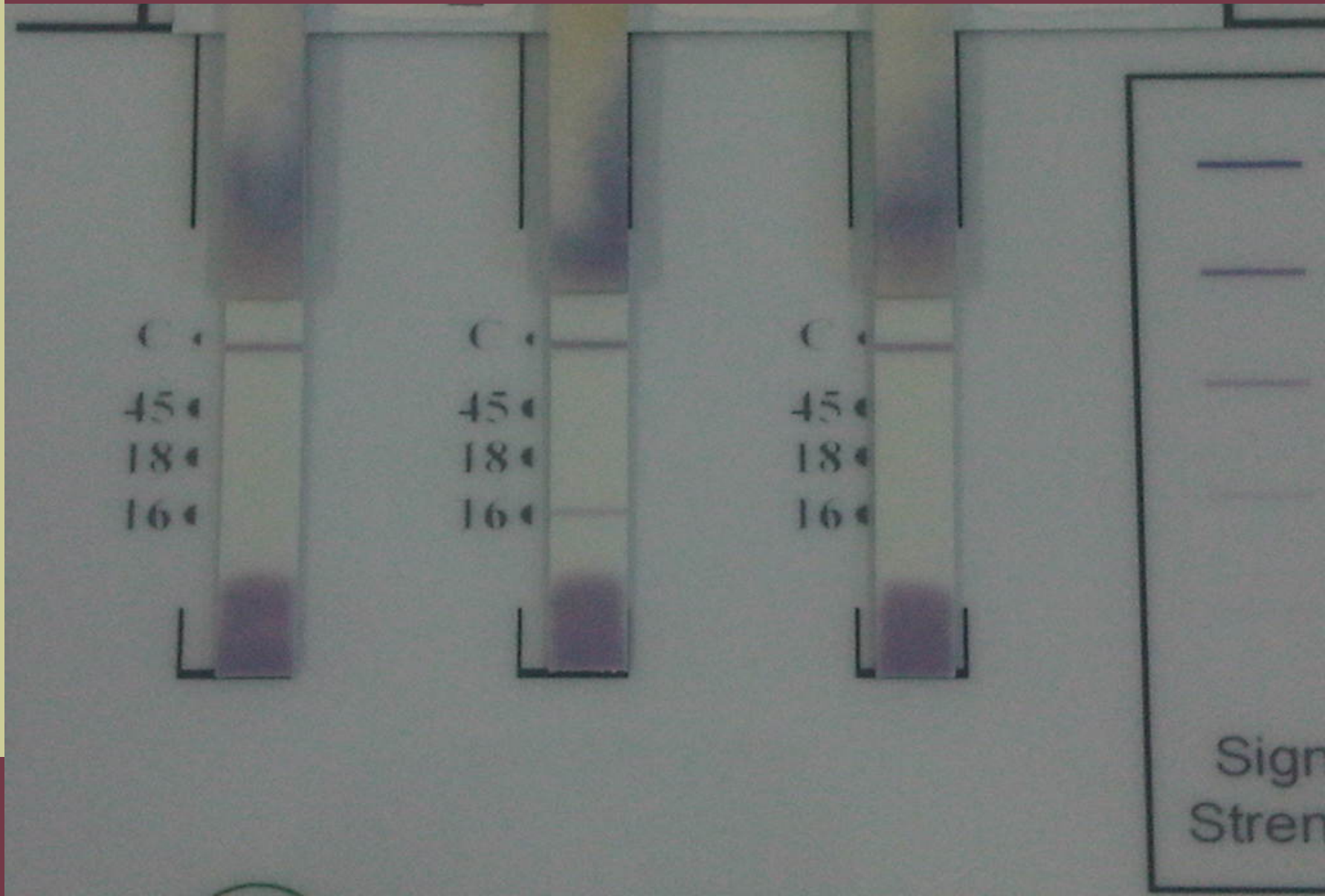
- E6 oncoprotein is captured and detected by specific anti E6 mAb; with HPV type-specific captures, the detector can have cross-E6 reactivity.
- The workflow does not require complex machinery nor a cold chain.
- Time from sample collection to results is approx. 120 minutes for the current prototype



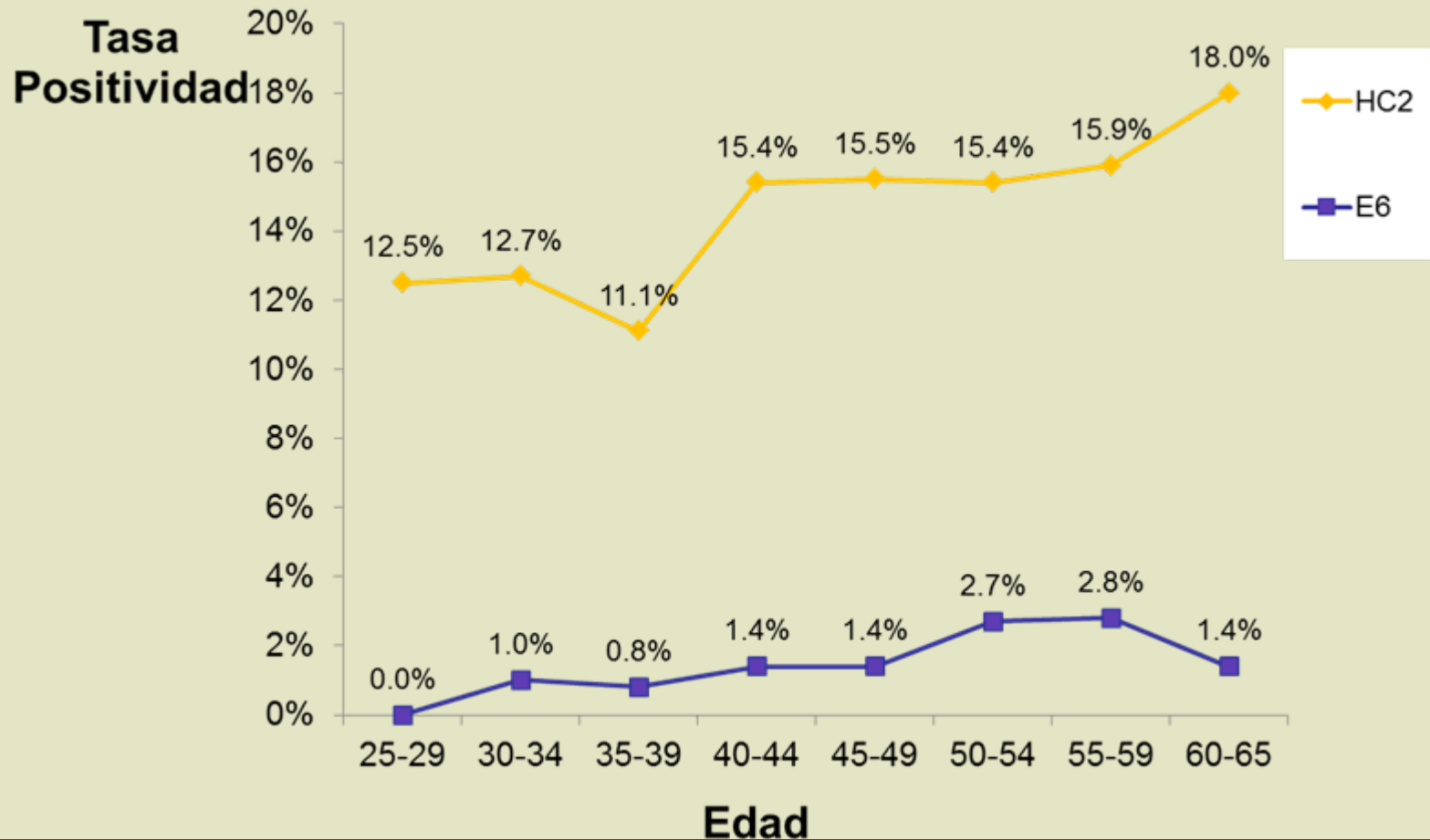
E6 strip test: HPV16/18/45



E6 test: test positivo en China



Tasa de positividad del test de HPV y E6 por edad



Eficacia del test de E6 por edad para detección de NIC3+ (tamizaje primario)

	Sensibilidad	Especificidad	VPP	VPN
25-34 years	0.0 (0.0-65.8)*	99.4 (98.1-99.8)	0.0 (0.0-56.2)*	99.6 (98.4-99.9)
35-54 years	73.3 (48.1-89.1)	99.0 (98.5-99.4)	34.4 (20.4-51.7)	99.8 (99.5-99.9)
≥55 years	83.3 (43.7-97.0)	98.5 (97.0-99.2)	38.5 (17.7-64.5)	99.8 (98.9-100.0)
All ages	69.6 (49.1-84.4)	99.0 (98.6-99.3)	33.3 (21.7-47.5)	99.8 (99.5-99.9)

* 2 casos de NIC3 en mujeres de 25-34 with CIN3+ fueron negativos al E6.

Con tantas alternativas, cual es la prueba que debemos usar?



Con tantas alternativas, cual es la prueba que debemos usar?

Primero debemos construir la plataforma para manejo y tratamiento de los casos positivos





Gracias!

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