



Maria Skłodowska-Curie

**National Research  
Institute of Oncology**

# **Current status of planned HPV-based cervical screening in Poland**

**Andrzej Nowakowski, MD, PhD, Associate Professor  
Specialist in Ob&Gyn and Gyn&Oncol**

**Central Coordination Centre for Cervical Cancer Screening  
Programme, Cervical Cancer Prevention Clinic, National  
Research Institute of Oncology, Warsaw, Poland**

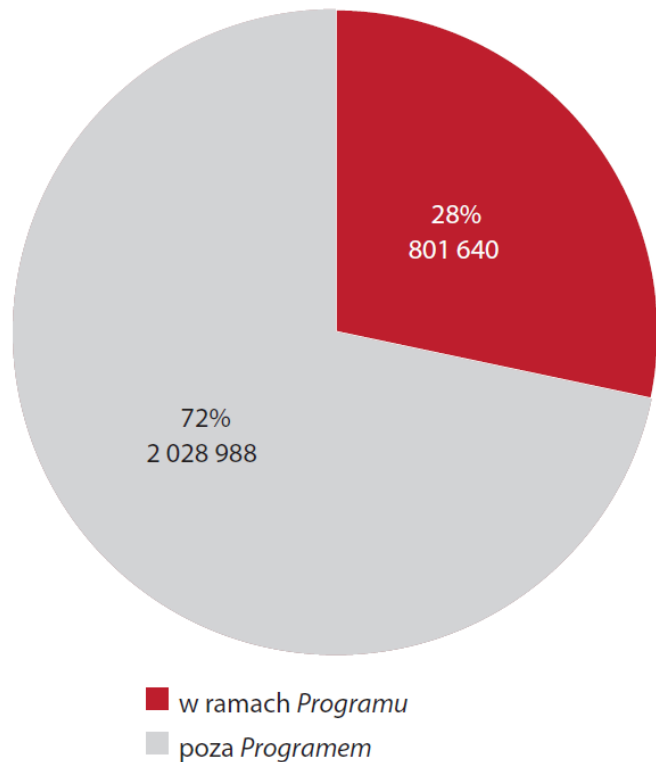
# The implementation of an organised cervical screening programme in Poland: an analysis of the adherence to European guidelines

Andrzej Nowakowski <sup>1</sup>, Marek Cybulski <sup>2</sup>, Andrzej Śliwczyński <sup>3</sup>, Arkadiusz Chil <sup>4</sup>, Zbigniew Teter <sup>5</sup>, Przemysław Seroczyński <sup>6</sup>, Marc Arbyn <sup>7</sup>, Ahti Anttila <sup>8</sup>

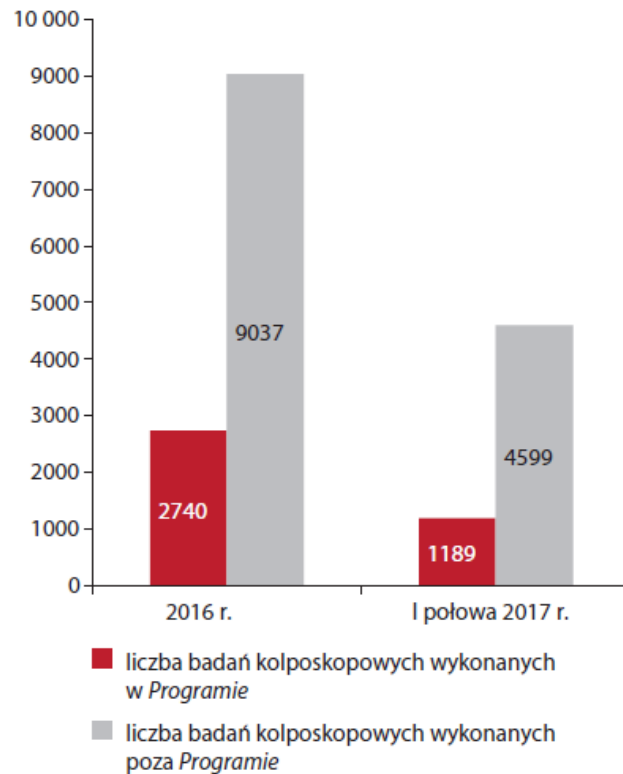
## Cervical Cancer Screening in Poland

1. Opportunistic
2. Organised (active) 2006/2007 until 2015 – Invitations stopped by the decision of the Ministry of Health (costs, problems with access to personal data, not cost-efficient?) – 1) cytology every 3 years 2) age 25-64(59)
3. Mixed – huge test consumption

Organised programme – only partially adherent to European Guidelines



**Rycina 5.** Liczba badań cytologicznych w skontrolowanych placówkach etapu diagnostycznego



**Rycina 8.** Liczba badań kolposkopowych wykonywanych w Programie i poza Programem



~ 26-14-%

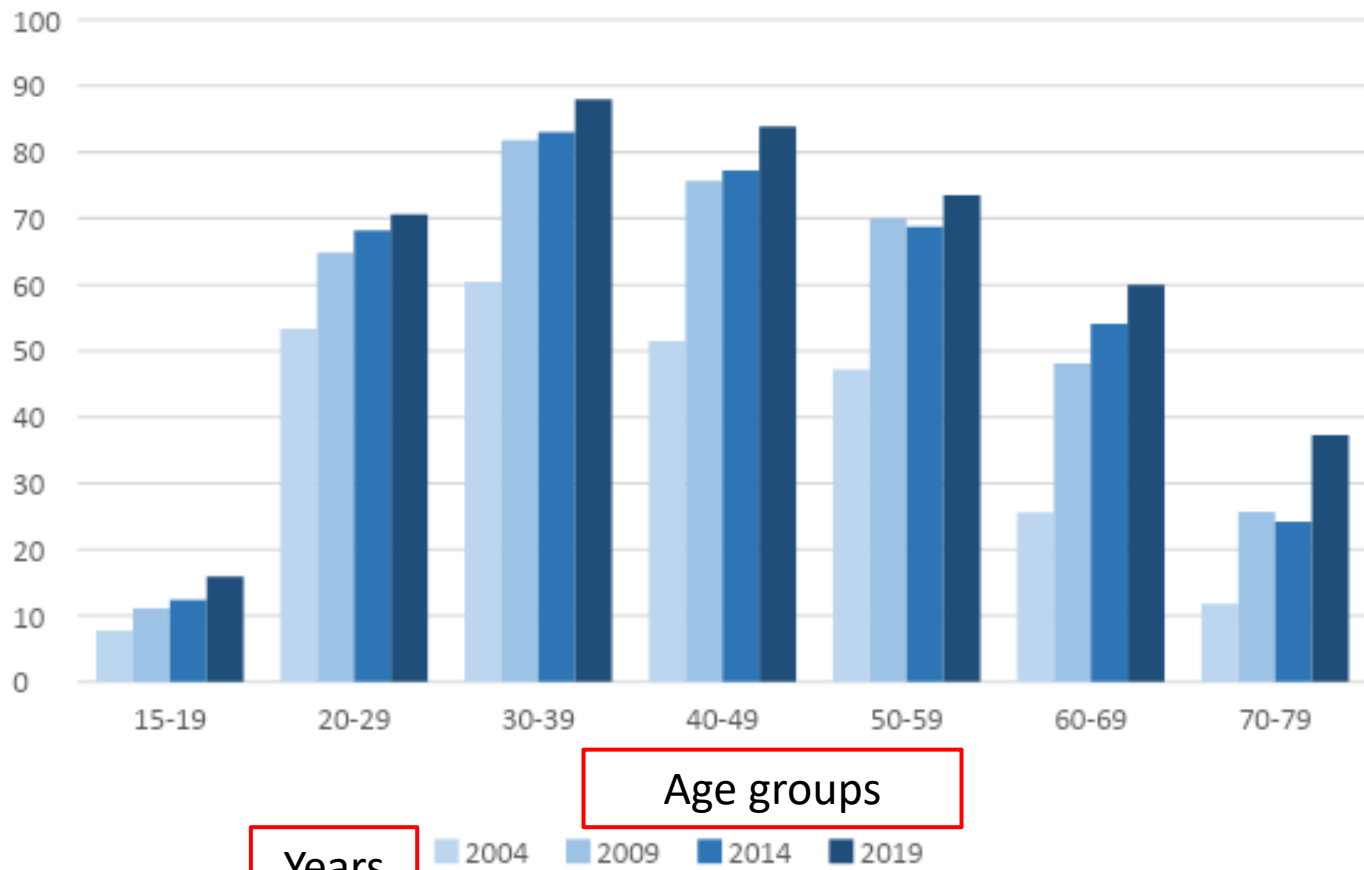
## Causes

- „Competition” with private and reimbursed opportunistic screening
- Low reimbursement (Lower than opportunistic reimbursed)
- More time and labour-consuming – fully registered data
- No central registry of opportunistic tests
- Women’s preference and confidence to private care
- Low confidence of women for reimbursed care
- Low interest of gynaecologists in the programme

# Declared coverage – Eurostat data based on Central Office for Statistics data



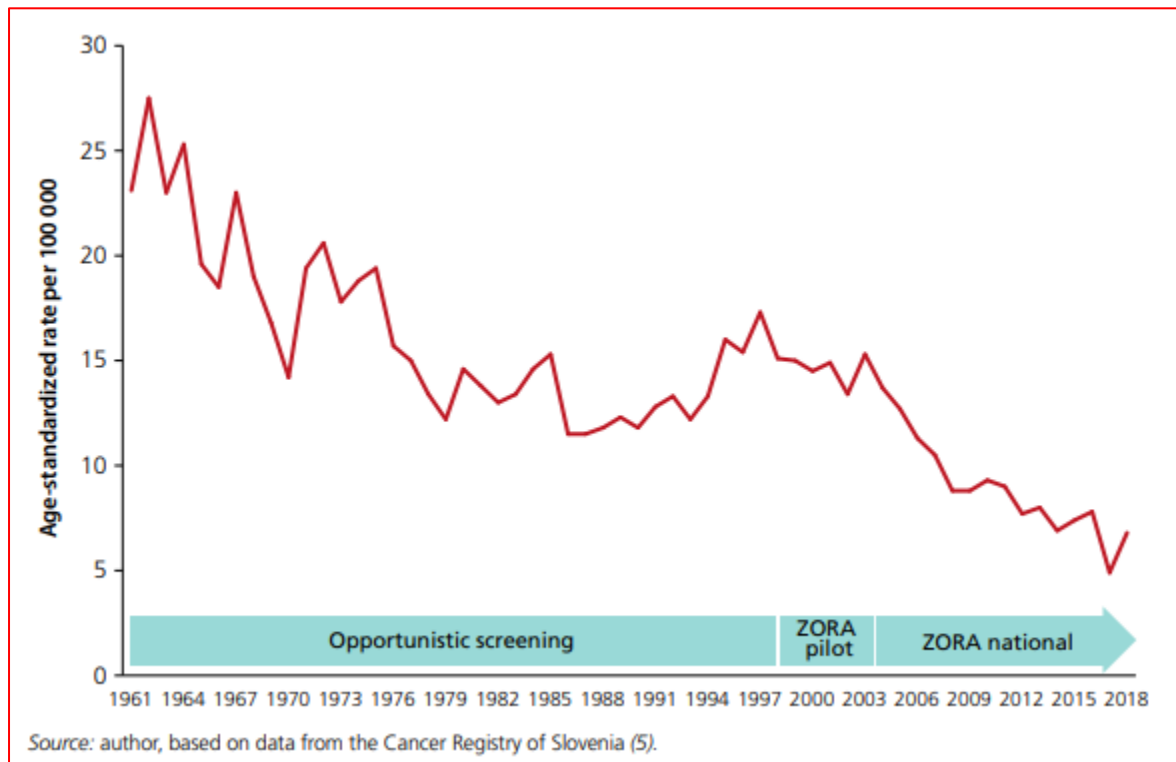
Questionnaire-based – declared coverage



Years

Age groups

## Opportunistic vs organised screening – the example of Slovenia

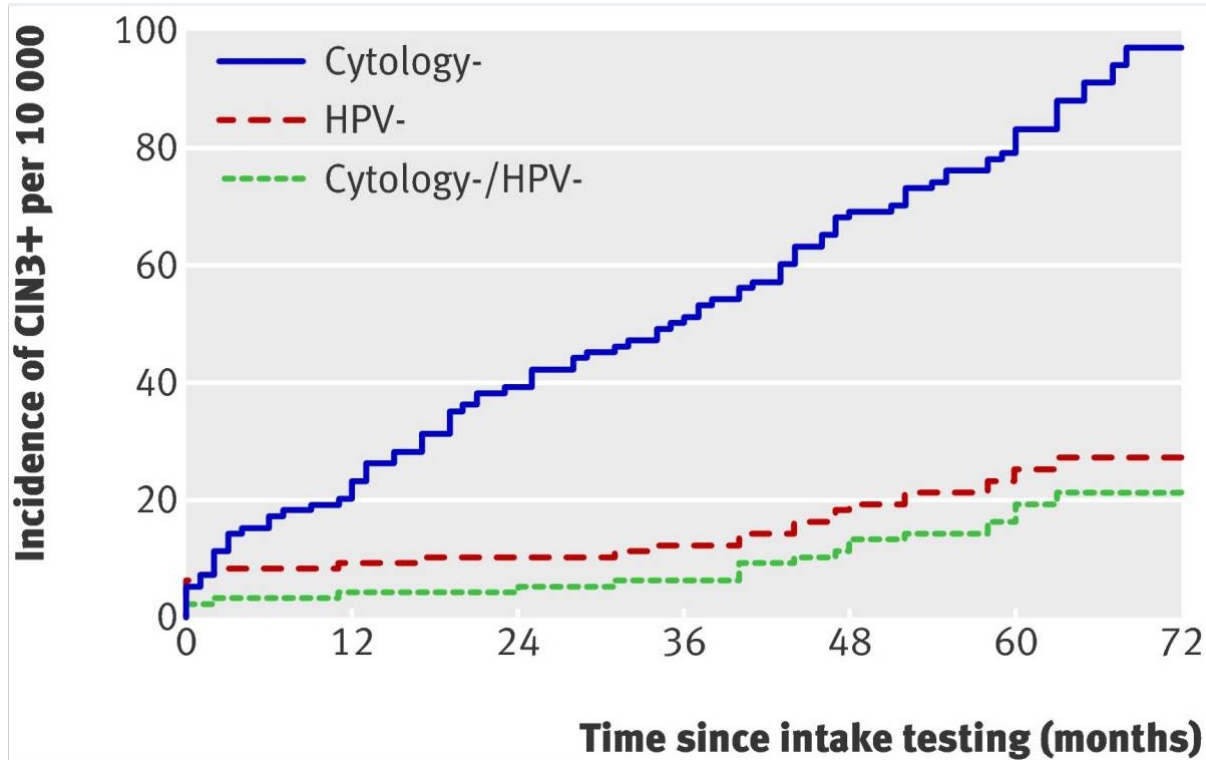




Maria Skłodowska-Curie

**National Research  
Institute of Oncology**

# Cytology vs HPV vs Cotesting



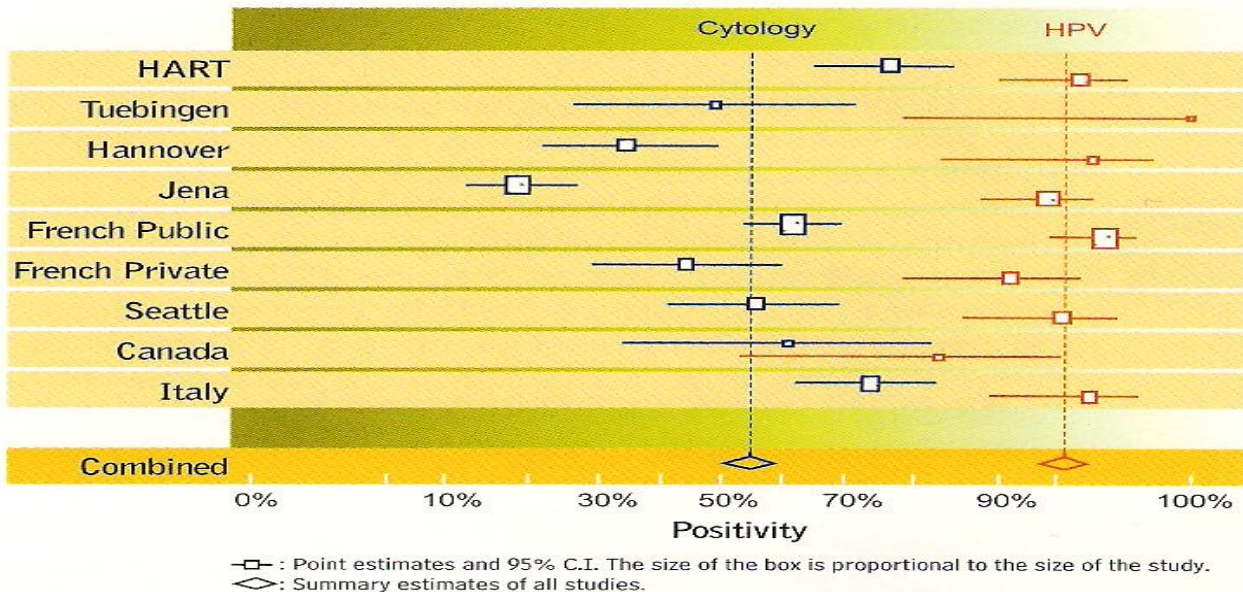


Maria Skłodowska-Curie

Nat  
Inst

# Cytology vs HR HPV testing

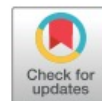
Global evaluation of the sensitivity (fraction of histology confirmed CIN 2+ detected by the test) of HPV tests as compared to cytology in studies in Europe and North America



**References:** •Cuzick J *et al.* Int. J. Cancer 2006;119:1095-1101. •Ronco G *et al.* J Natl Cancer Inst 2006;98:765-74.



# Performance of cervical cytology and HPV testing for primary cervical cancer screening in Latin America: an analysis within the ESTAMPA study



Arianis Tatiana Ramírez,<sup>a,\*</sup> Joan Valls,<sup>a</sup> Armando Baena,<sup>a</sup> Freddy David Rojas,<sup>b</sup> Katherine Ramírez,<sup>b</sup> Rodrigo Álvarez,<sup>b</sup> Carmen Cristaldo,<sup>c</sup> Odessa Henríquez,<sup>d</sup> Adrián Moreno,<sup>e</sup> Daysi Colque Reynaga,<sup>f</sup> Hans González Palma,<sup>f</sup> Isabel Robinson,<sup>g</sup> Diana Carolina Hernández,<sup>h</sup> Rosa Bardales,<sup>i</sup> Lucia Cardinal,<sup>j</sup> Yuly Salgado,<sup>k</sup> Sandra Martínez,<sup>k</sup> Emmanuel González,<sup>l,m</sup> Diego Guillén,<sup>m,n</sup> Laura Fleider,<sup>j</sup> Silvio Tatti,<sup>j</sup> Verónica Villagra,<sup>o</sup> Gino Venegas,<sup>p,q</sup> Aurelio Cruz-Valdez,<sup>r</sup> Marleny Valencia,<sup>h</sup> Guillermo Rodríguez,<sup>s</sup> Carolina Terán,<sup>f</sup> María Alejandra Picconi,<sup>t</sup> Annabelle Ferrera,<sup>u</sup> Elena Kasamatsu,<sup>c</sup> Laura Mendoza,<sup>c</sup> Alejandro Calderon,<sup>b</sup> Silvana Luciani,<sup>v</sup> Nathalie Broutet,<sup>w</sup> Teresa Darragh,<sup>x</sup> Maribel Almonte,<sup>a,w</sup> and Rolando Herrero,<sup>a,m</sup> on behalf of the ESTAMPA Study Group

The Lancet Regional Health - Americas 2023;26: 100593

Published Online xxx  
<https://doi.org/10.1016/j.lana.2023.100593>

## Cytology

## HPV

	All women	30–39 years	40–49 years	50–64 years	p-value	All women	30–39 years	40–49 years	50–64 years	p-value
<b>Test positivity</b>	1308 (4.3%)	619 (5.3%)	451 (4.6%)	238 (2.6%)		3993 (13.0%)	1961 (16.7%)	1124 (11.4%)	908 (10.1%)	

## Performance characteristics

### CIN3+

Sensitivity	48.5% (43.9–53.1)	48.5% (42.5–54.5)	50.6% (42.8–48.5)	42.6% (30.0–55.9)	0.60	98.1% (96.4–99.1)	98.5% (96.5–99.5)	97.4% (94.1–99.2)	98.1% (92.1–99.9)	0.80
Specificity	96.5% (96.3–96.7)	95.9% (95.5–96.3)	96.2% (95.8–96.6)	97.6% (97.3–97.9)	<0.0001	88.7% (88.3–89.0)	85.9% (85.2–86.5)	90.3% (89.7–90.8)	90.6% (89.9–91.1)	<0.0001



Maria Skłodowska-Curie

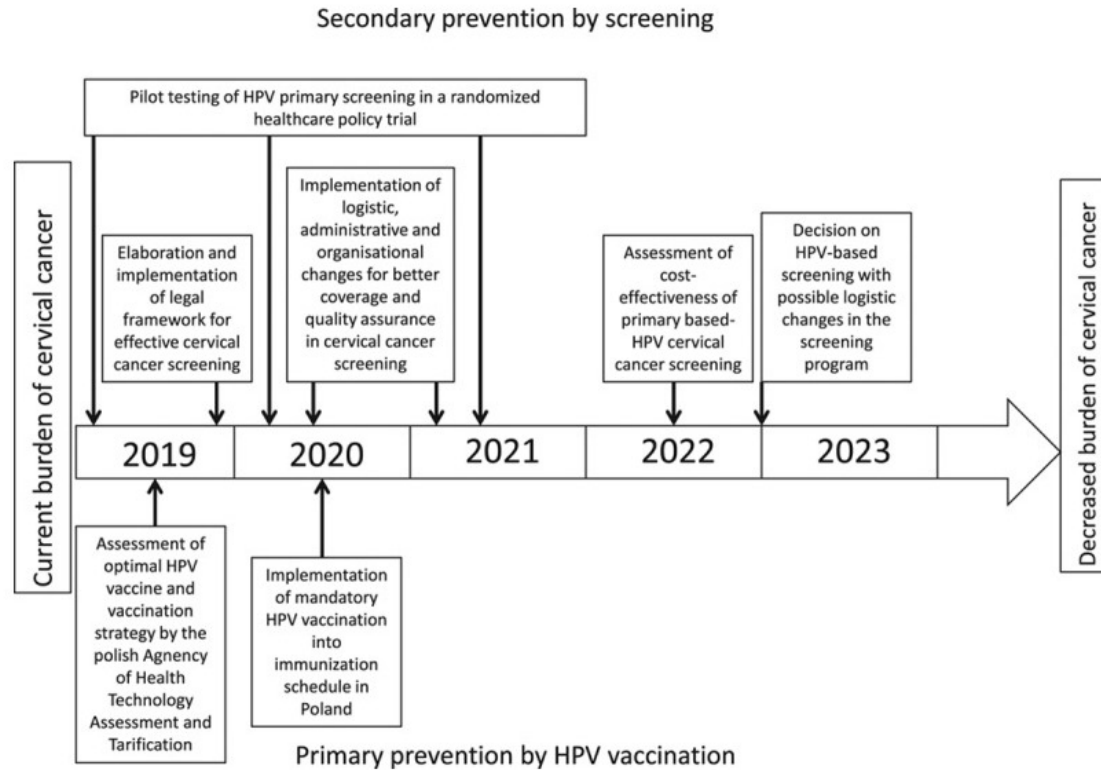
**National Research  
Institute of Oncology**

- 1 [Reasons for truly negative cytology reports preceding the diagnoses of invasive cervical cancer-Results of a false-negative cytology audit in Polish Cervical Cancer Screening Programme.](#)  
Cite Macios A, Komerska K, Nowakowski A.  
Share Cancer Med. 2023 Jun;12(12):13800-13810. doi: 10.1002/cam4.6024. Epub 2023 May 22. PMID: 37211978 [Free PMC article.](#)
- 2 [False Negative Results in Cervical Cancer Screening-Risks, Reasons and Implications for Clinical Practice and Public Health.](#)  
Cite Macios A, Nowakowski A.  
Share Diagnostics (Basel). 2022 Jun 20;12(6):1508. doi: 10.3390/diagnostics12061508. PMID: 35741319 [Free PMC article.](#) [Review.](#)  
[Item in Clipboard](#)
- 3 [Why are Polish women diagnosed with invasive cervical cancer after negative cytology in the organized screening programme - a pilot reevaluation of negative Pap smears preceding diagnoses of interval cancers.](#)  
Cite Komerska K, Macios A, Glińska P, Olszewski W, Didkowska J, Wojciechowska U, Kamiński MF, Nowakowski A.  
Share Pol J Pathol. 2021;72(3):261-266. doi: 10.5114/pjp.2021.112832. PMID: 35048639 [Free article.](#)  
[Item in Clipboard](#)
- 4 [Interlaboratory agreement in assessment of gynaecological cytology in Cervical Cancer Screening Programme in Poland - a pilot evaluation.](#)  
Cite Zalewska-Otwinowska K, Macios A, Komerska K, Rekosz M, Nowakowski A.  
Share Pol J Pathol. 2021;72(1):75-83. doi: 10.5114/pjp.2021.106445. PMID: 34060290 [Free article.](#)  
[Item in Clipboard](#)
- 5 [Risk factors of cervical cancer after a negative cytological diagnosis in Polish cervical cancer screening programme.](#)  
Cite Macios A, Didkowska J, Wojciechowska U, Komerska K, Glińska P, Kamiński MF, Nowakowski A.  
Share Cancer Med. 2021 May;10(10):3449-3460. doi: 10.1002/cam4.3857. Epub 2021 May 2. PMID: 33934537 [Free PMC article.](#)  
[Item in Clipboard](#)



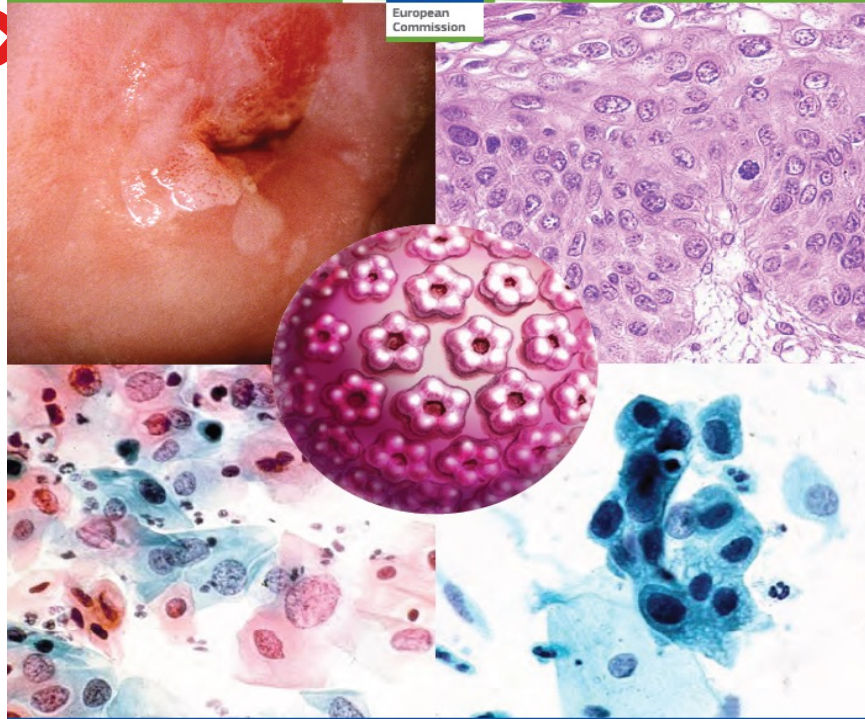
HPV-based  
CC screening  
in Europe

Fig. 1



Proposed scheme of actions on the time axis to decrease the burden of cervical cancer: a roadmap for a comprehensive control of cervical cancer in Poland.

Nowakowski A, Arbyn M, Turkot MH, Wieszczy P, Miłosz K, Kamiński MF, Didkowska J, Bidziński M, Olszewski W, Wielgoś M, Krzakowski M, Kuchar E, Walewski J. A roadmap for a comprehensive control of cervical cancer in Poland: integration of available solutions into current practice in primary and secondary prevention. *Eur J Cancer Prev.* 2020 Mar;29(2):157-164.



European guidelines for quality assurance  
in cervical cancer screening  
Second edition - Supplements



# HPV HR in CC screening

- Pilot evaluation before implementation
- Only in organised screening

**HPV HR pilot study**  
**(HIPPO project: HPV Testing In Polish POpulation-based  
Cervical Cancer Screening Program)**



Maria Skłodowska-Curie

**National Research  
Institute of Oncology**

➤ [BMC Cancer. 2023 Nov 17;23\(1\):1118. doi: 10.1186/s12885-023-11597-5.](#)

## HPV testing in Polish population-based cervical cancer screening programme (HIPPO project)–study protocol of a randomised healthcare policy trial

Patrycja Glinska <sup>1 2</sup>, Katarzyna Komerska <sup>3</sup>, Beata Janik <sup>3</sup>, Julia Olkowicz <sup>4</sup>, Ilona Jedrzejewska <sup>3</sup>, Anna Macios <sup>3 5</sup>, Paulina Wieszczy <sup>6 7</sup>, Michał F Kaminski <sup>8 3 6 7 9</sup>, Marc Arbyn <sup>10</sup>, Andrzej Nowakowski <sup>3</sup>

- Primary endpoint – CIN2+ detection rate in both arms and detection rate ratios between the arms

Women aged 30-59



Eligible for participation in CC screening program  
no Pap test within 3 years (or 1 year in high-risk group)

1:1 randomization - 2 arms



*Current practice*

Pap/LBC



Rescreen in 3 years



Triage protocol

*New screening test*

hrHPV test



Study protocol



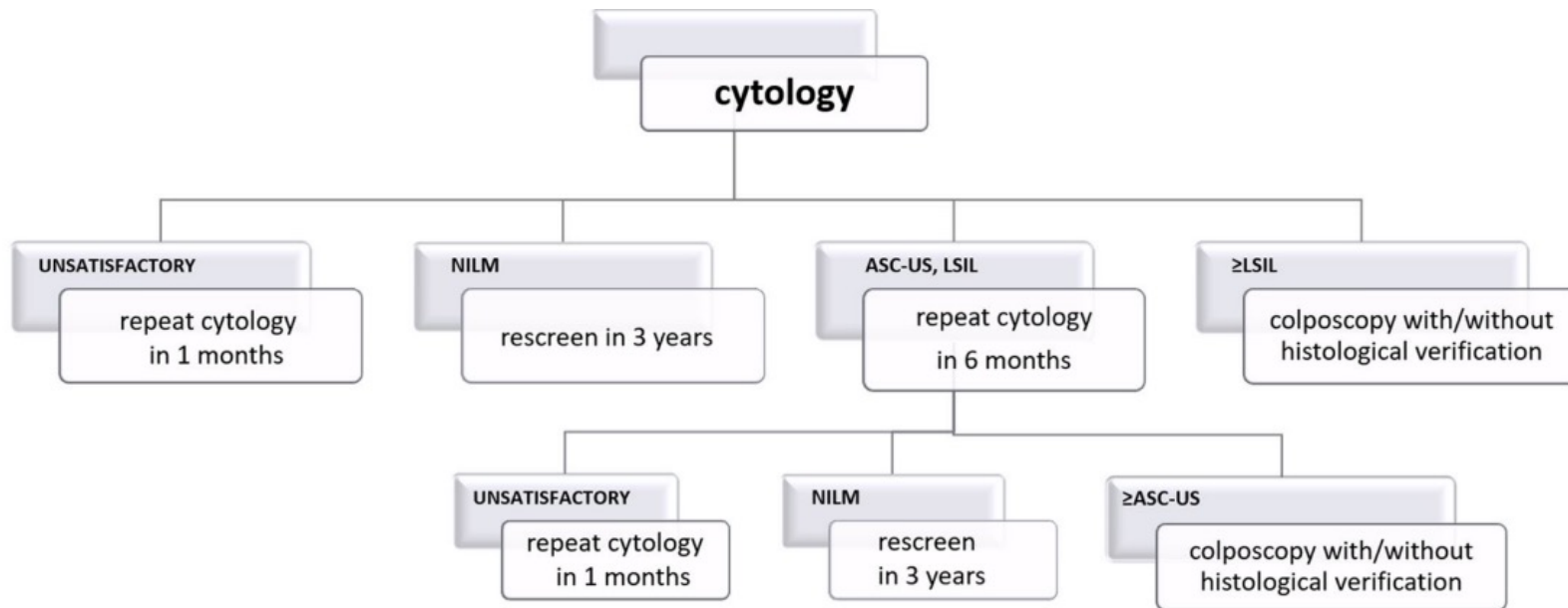
Rescreen in 5 years

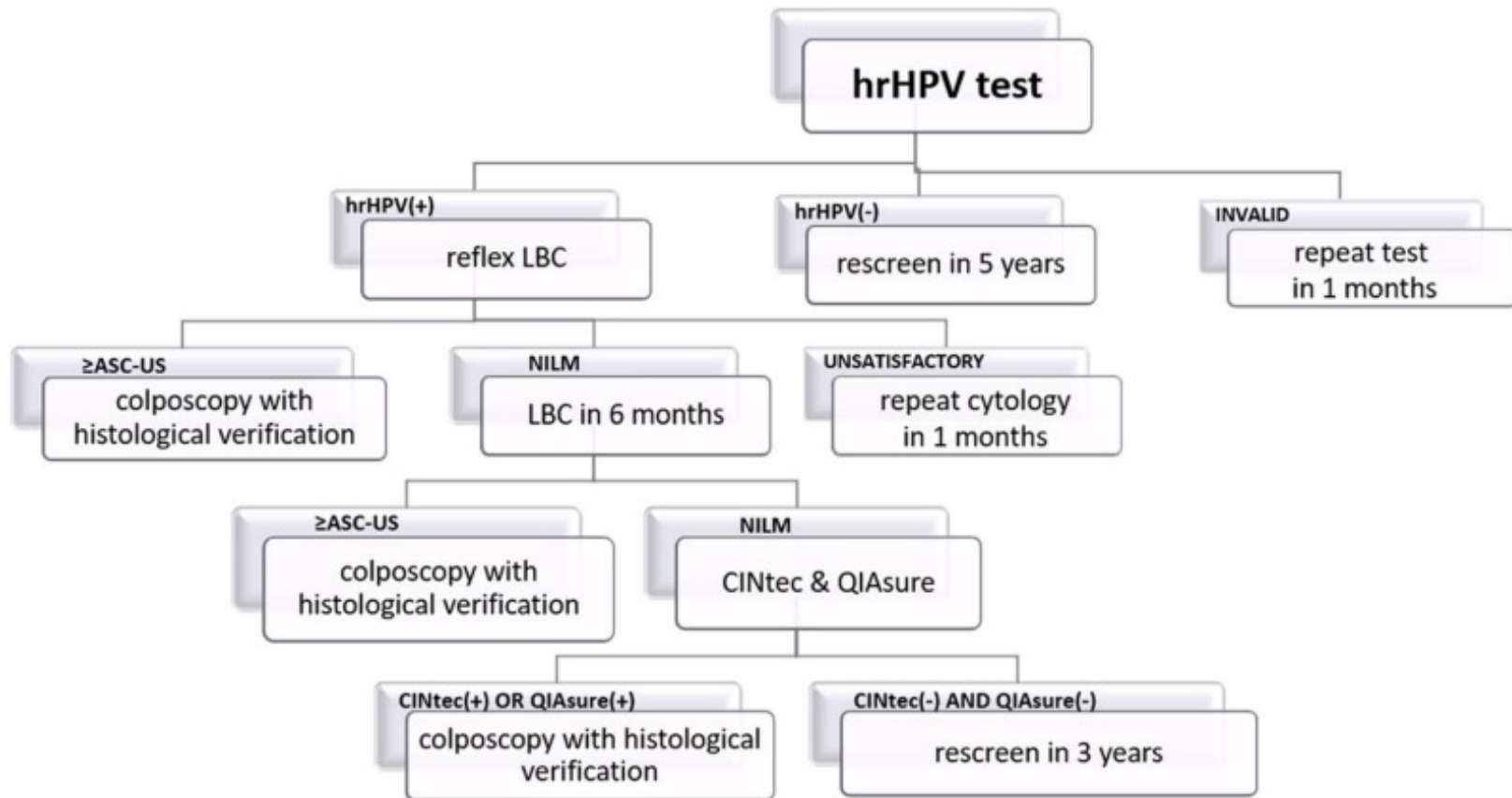




Maria Skłodowska-Curie

**National Research  
Institute of Oncology**







Maria Skłodowska-Curie

**National Research  
Institute of Oncology**



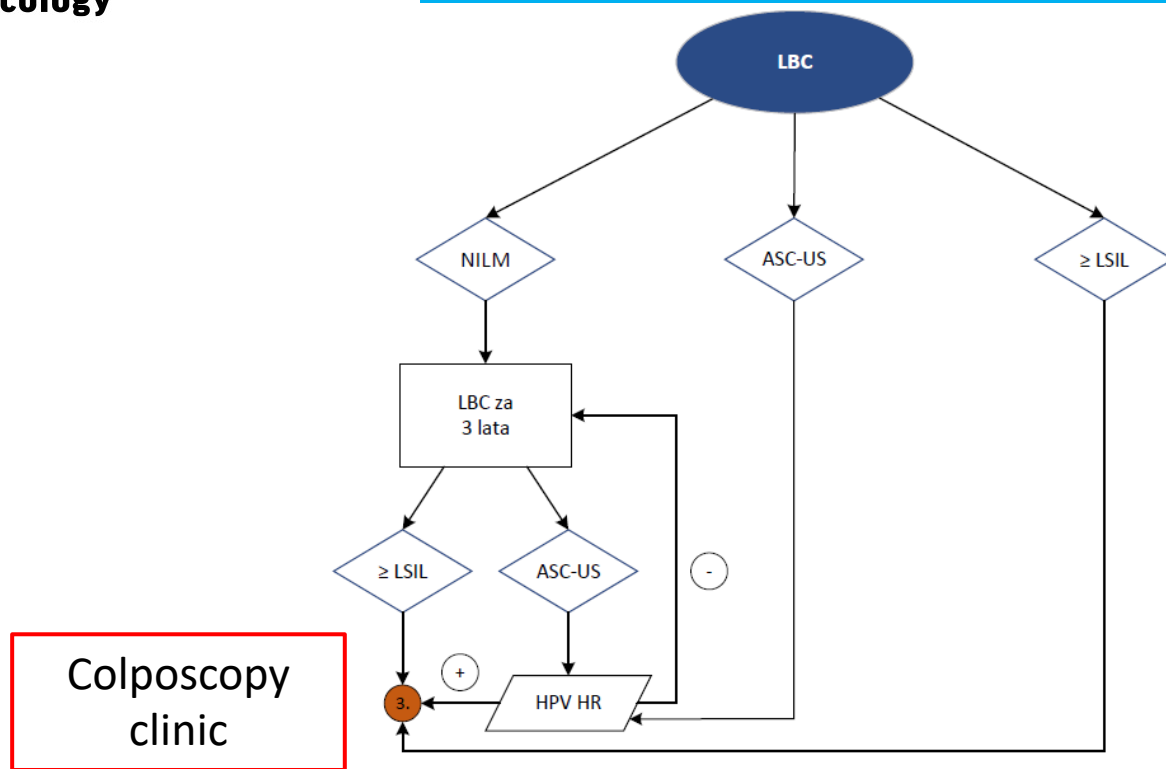
Ministerstwo Zdrowia

**Program wieloletni pn.  
NARODOWA STRATEGIA  
ONKOLOGICZNA  
na lata 2020-2030**

**Introduction of HPV-based screening  
in Poland - 2024**

**National Strategy for Oncology –  
Cancer Plan for Poland**

# Proposed screening algorithm for women 25-29





**Program  
Profilaktyki  
Raka  
Szyjki  
Macicy w Polsce**

projekt - 2024 po wprowadzeniu  
diagnostyki molekularnej HPV HR

Dokument opracowany przez Zespół Centralnego Ośrodka Koordynującego pod kierownictwem Dr hab. n. med. Andrzeja Nowakowskiego, prof. Instytutu.

Centralny Ośrodek Koordynujący, Zakład Profilaktyki Nowotworów, Narodowy Instytut Onkologii im. Marii Skłodowskiej-Curie - Państwowy Instytut Badawczy

# New edition of HPV-based organised screening programme – proposal for the Ministry of Health

Działanie 11.1 Narodowej Strategii Onkologicznej:

*W 2024 r. wprowadzimy do Programu profilaktyki raka szyjki macicy test HPV-DNA*

Dokument opracowany przez Zespół Centralnego Ośrodka Koordynującego pod kierownictwem

Dr hab. n. med. Andrzeja Nowakowskiego, prof. Instytutu

Zakład Profilaktyki Nowotworów, Narodowy Instytut Onkologii im. Marii Skłodowskiej-Curie – Państwowy Instytut Badawczy



Maria Skłodowska-Curie

**National Research  
Institute of Oncology**

## Organisation of CC screening - proposals

- Wide access to screening – gynaecological clinics, private offices and centres, midwives at family medicine centres, vaginal sampling, self-sampling
- Central database/IT system – integration with opportunistic screening
- Quality assurance at each step – KPI etc.
- Return to Invitations
- Central and regional coordination
- Fail-safe system – active capture of positive screening results by regional colposcopy units
- Free-of-charge certification for cytomorphologists and colposcopists



# Narodowy Instytut Onkologii

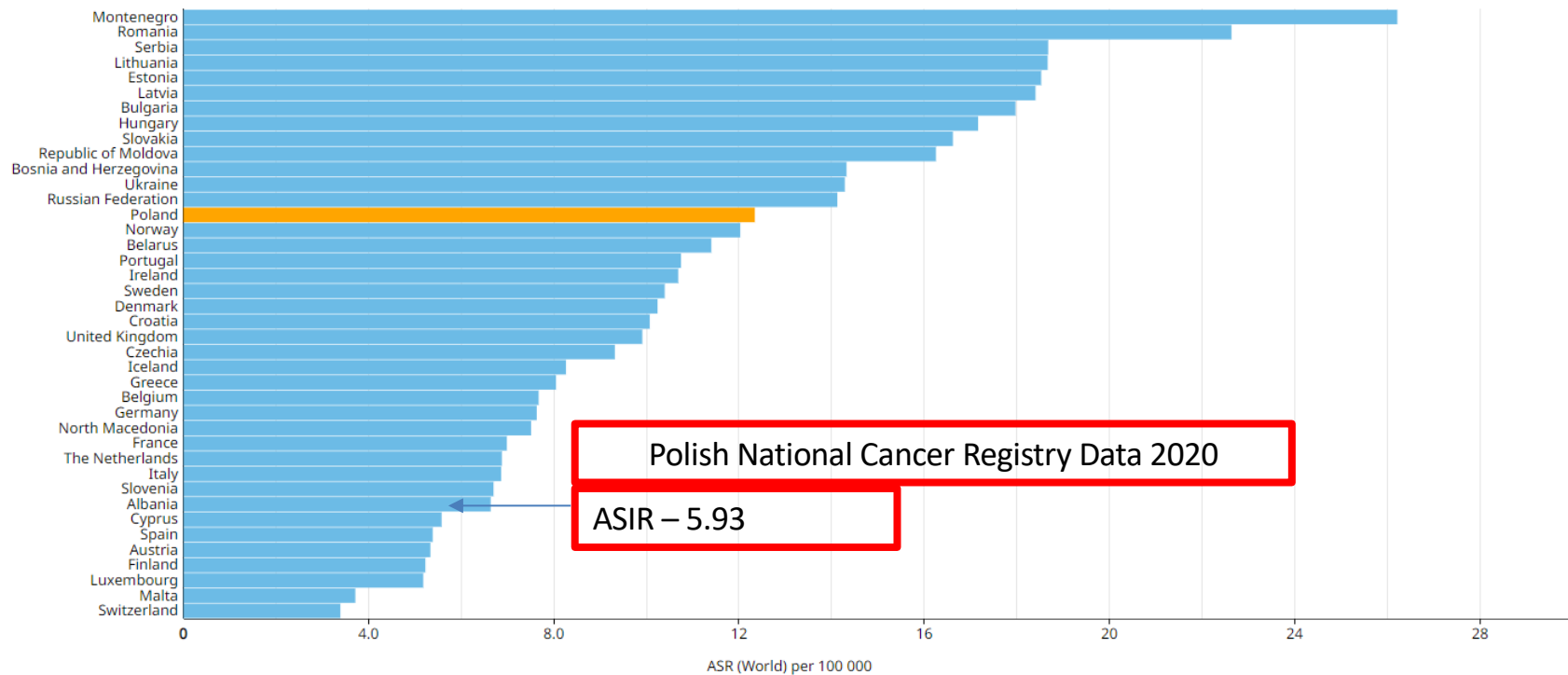
im. Marii Skłodowskiej-Curie  
Państwowy Instytut Badawczy

**Thanks for your attention**

**[andrzej.nowakowski@nio.gov.pl](mailto:andrzej.nowakowski@nio.gov.pl)**

# Cervical cancer incidence in Poland

Estimated age-standardized incidence rates (World) in 2020, cervix uteri, females, all ages



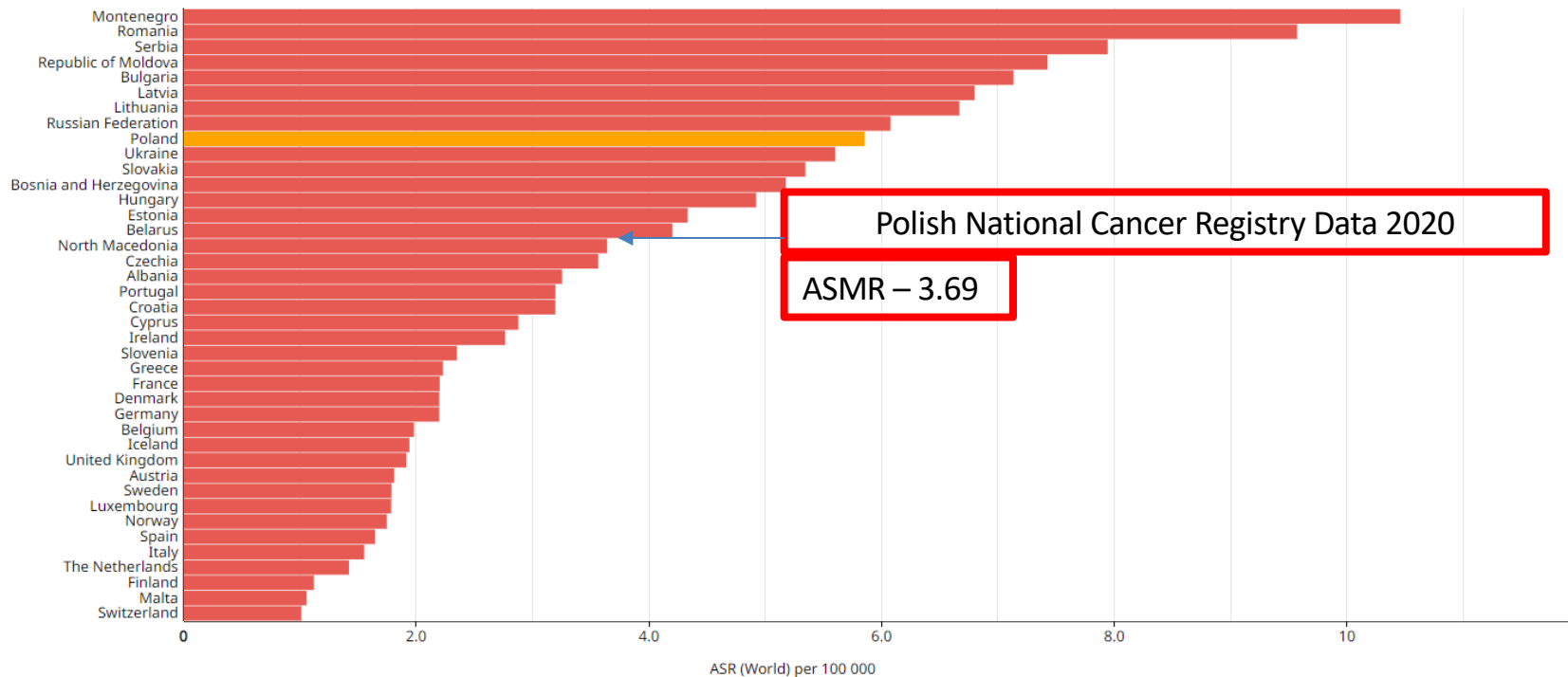
Polish National Cancer Registry Data 2020  
ASIR – 5.93

Data source: GLOBOCAN 2020  
Graph production: Global Cancer Observatory (<http://gco.iarc.fr/>)  
© International Agency for Research on Cancer 2023



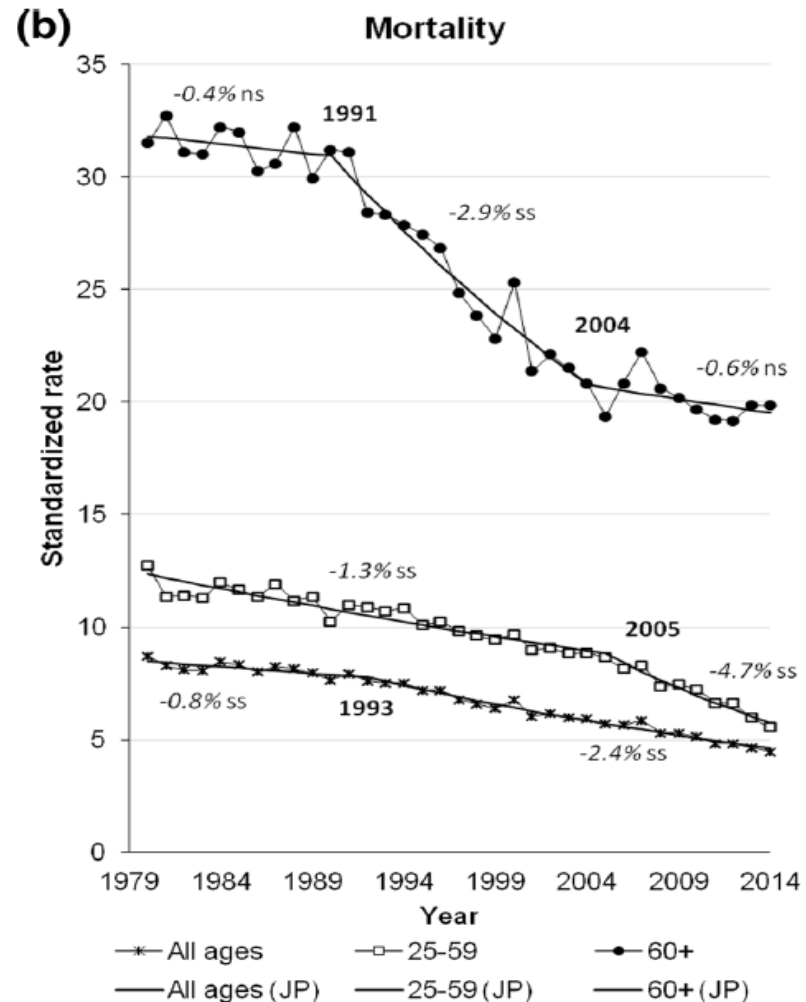
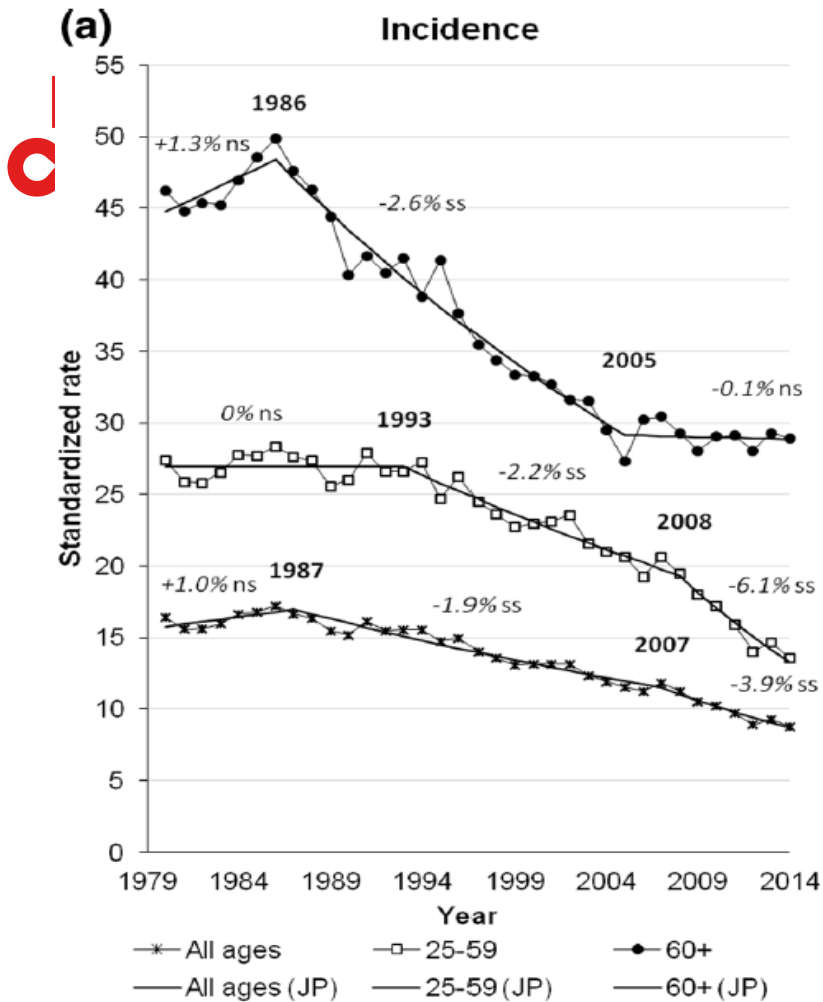
# Cervical cancer mortality in Poland

Estimated age-standardized mortality rates (World) in 2020, cervix uteri, females, all ages



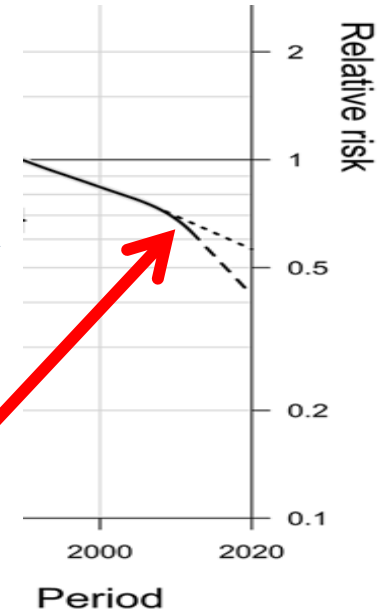
Polish National Cancer Registry Data 2020  
ASMR – 3.69

Data source: GLOBOCAN 2020  
Graph production: Global Cancer Observatory (<http://gco.iarc.fr/>)  
© International Agency for Research on Cancer 2023





(c)



Wprowadzenie programu