Why coverage of cervical cancer screening remains low?

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70%

of women are screened with a **high-performance test** by 35 and 45 years of age

CCEI Pillar 2 Strategic Actions

- Understand barriers, create enabling environment
- Integrate screening and treatment services into primary care to increase coverage
- Promote simple screening algorithms to increase retention across the screening continuum and programmes' efficiency
- Ensure affordable supply of quality assured, high-performance screening tests & treatment devices
- Strengthen laboratory capacity

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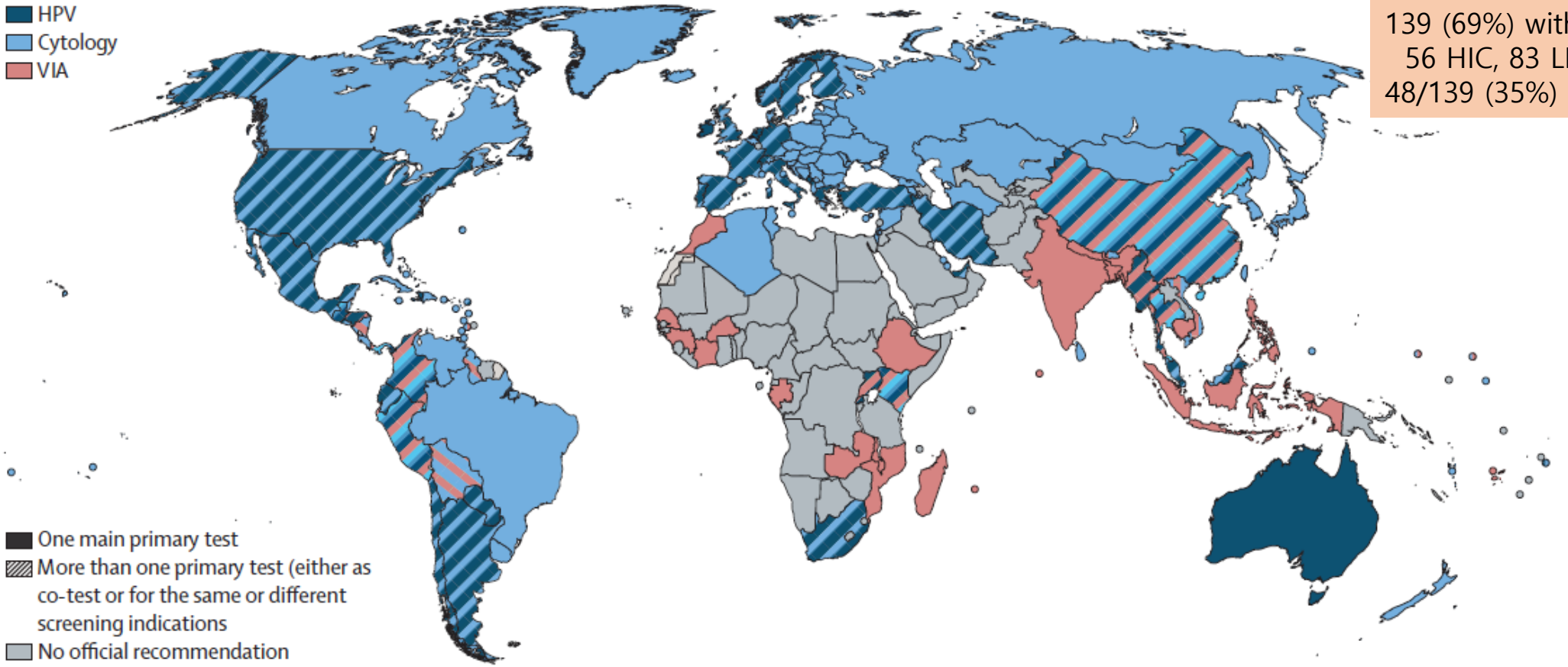
Official recommended tests for primary cervical cancer screening up to October 2020

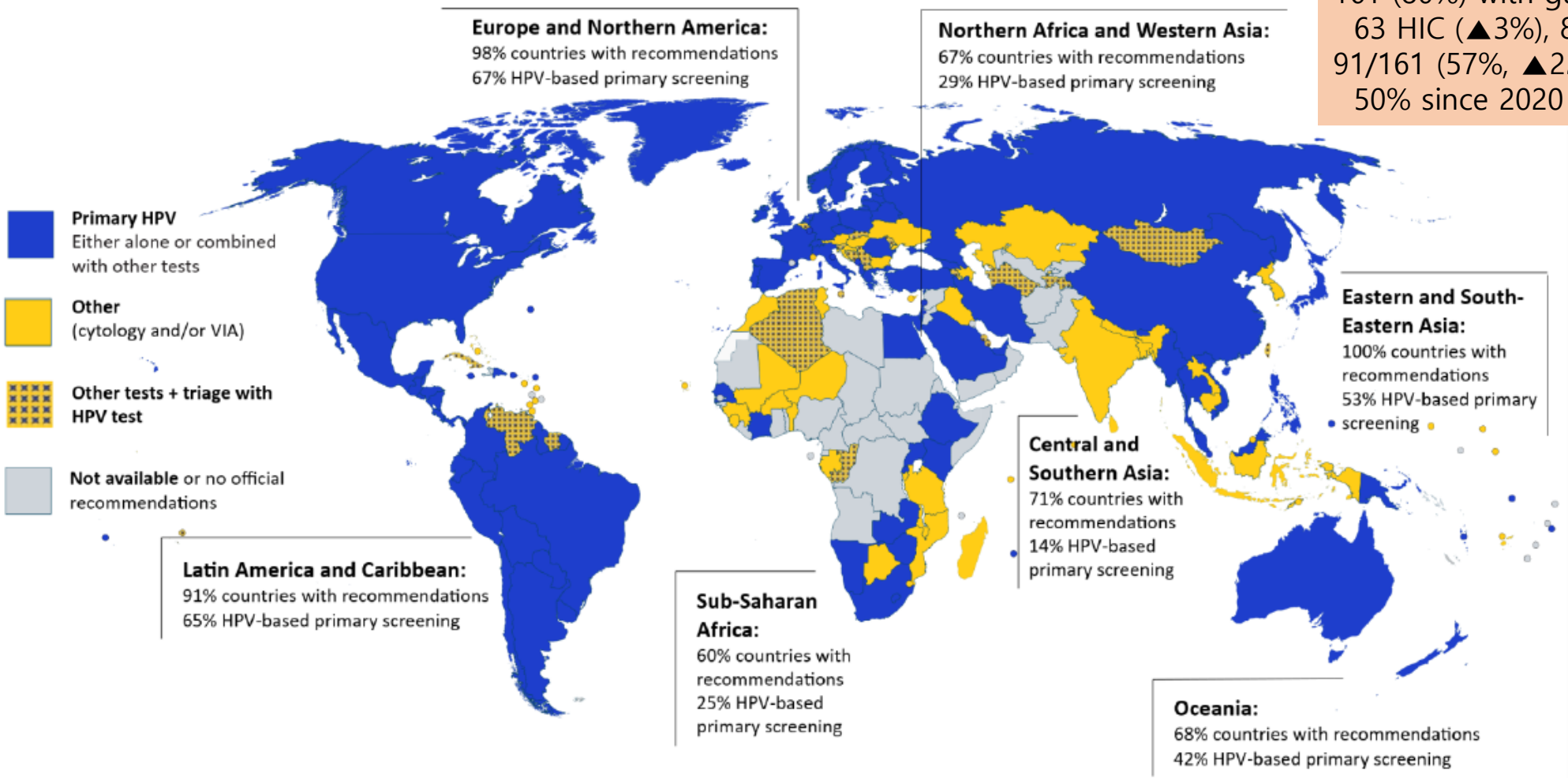


139 (69%) with guidelines
56 HIC, 83 LMIC
48/139 (35%) recommended HPV

Bruni et al, LGH 2022

Official recommended tests for primary cervical cancer screening up to July 2025

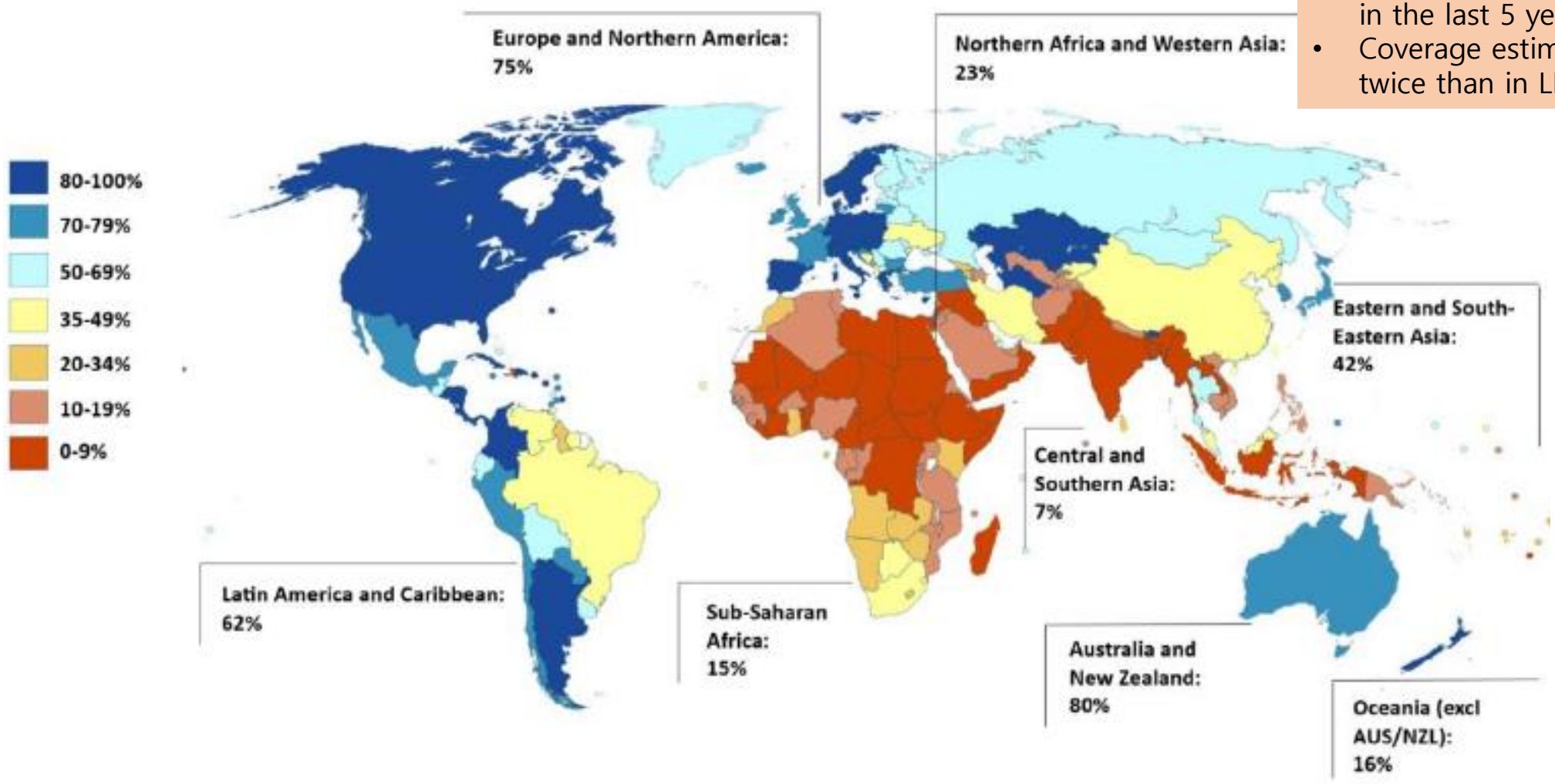
161 (80%) with guidelines
63 HIC (▲3%), 83 LMIC (▲14%)
91/161 (57%, ▲22%), recommended HPV
50% since 2020



Serrano et al, LGH in press

Estimated 5-year cervical cancer screening coverage in women aged 30–49 years in 2022

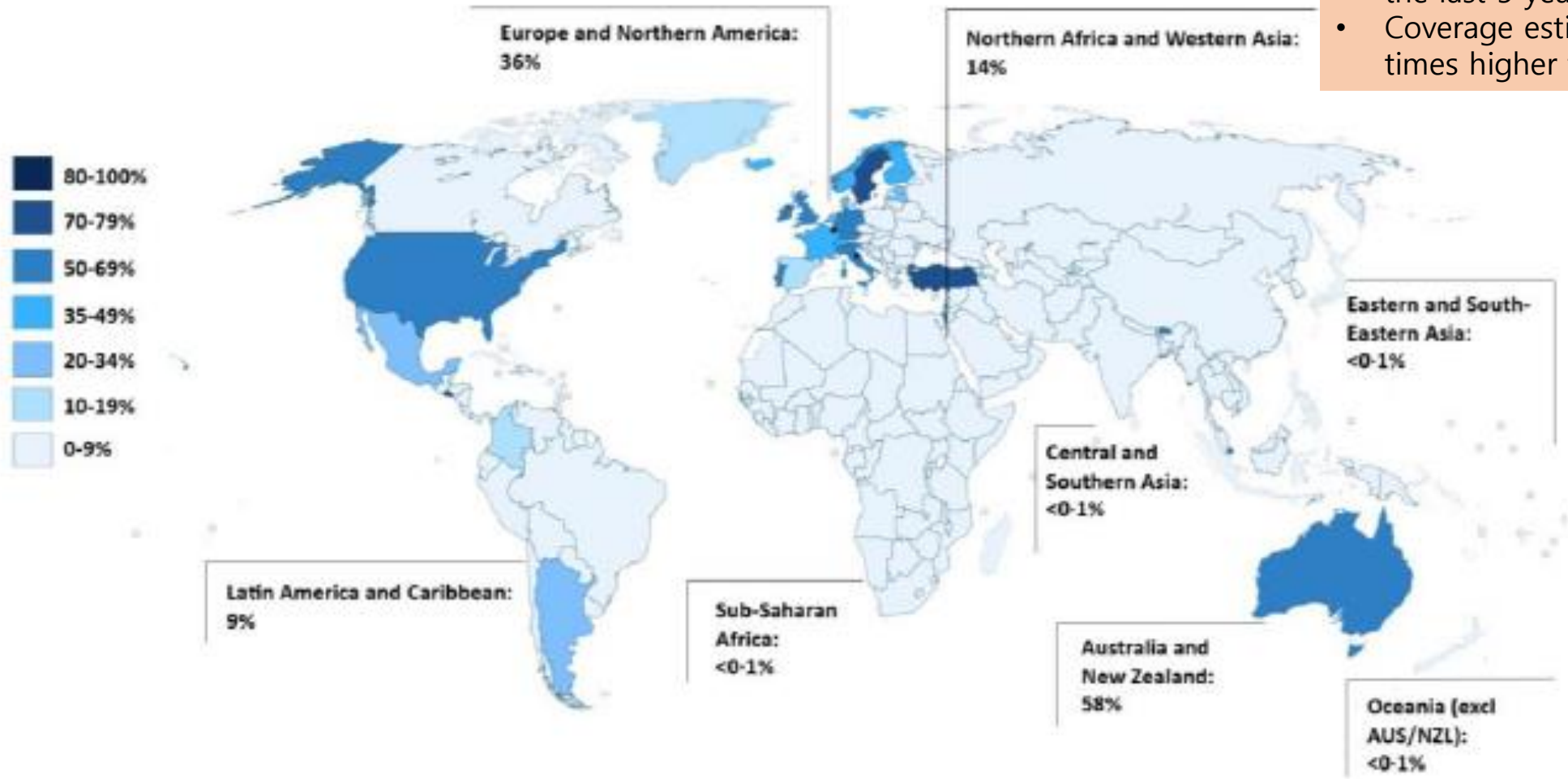
- 369 million (35%) screened in the last 5 years
- Coverage estimates in HIC twice than in LMIC



Serrano et al, LGH in press

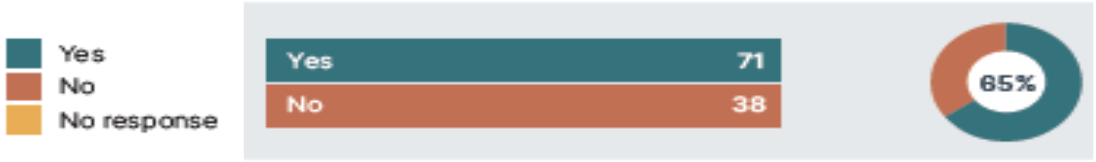
Estimated 5-year cervical cancer screening coverage with HPV testing in women aged 30–49 years in 2022

- 81 million (7%) screened in the last 5 years
- Coverage estimates in HIC 15 times higher than in LMIC

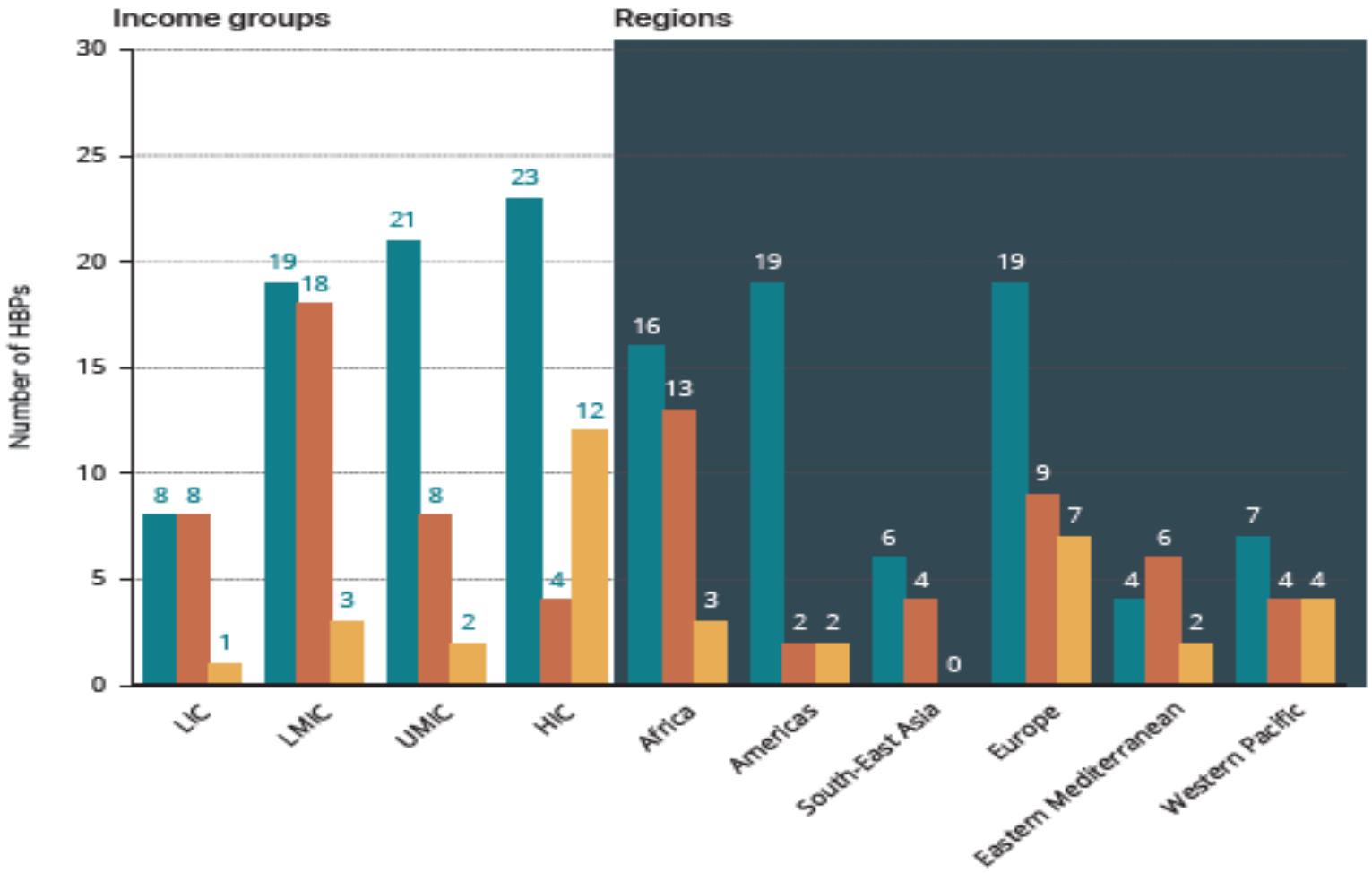


Serrano et al, LGH in press

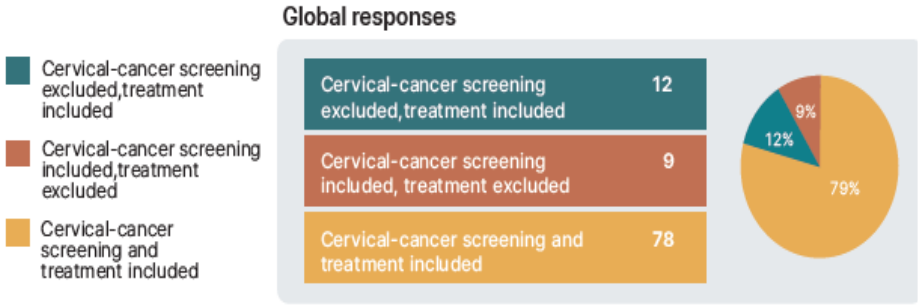
HPV testing inclusion in health-benefit packages 2020-2021



WHO global survey on the inclusion of cancer care in health-benefit packages 2020-2021



Coverage of screening and treatment of cervical cancer included in health-benefit packages in 2020-2021



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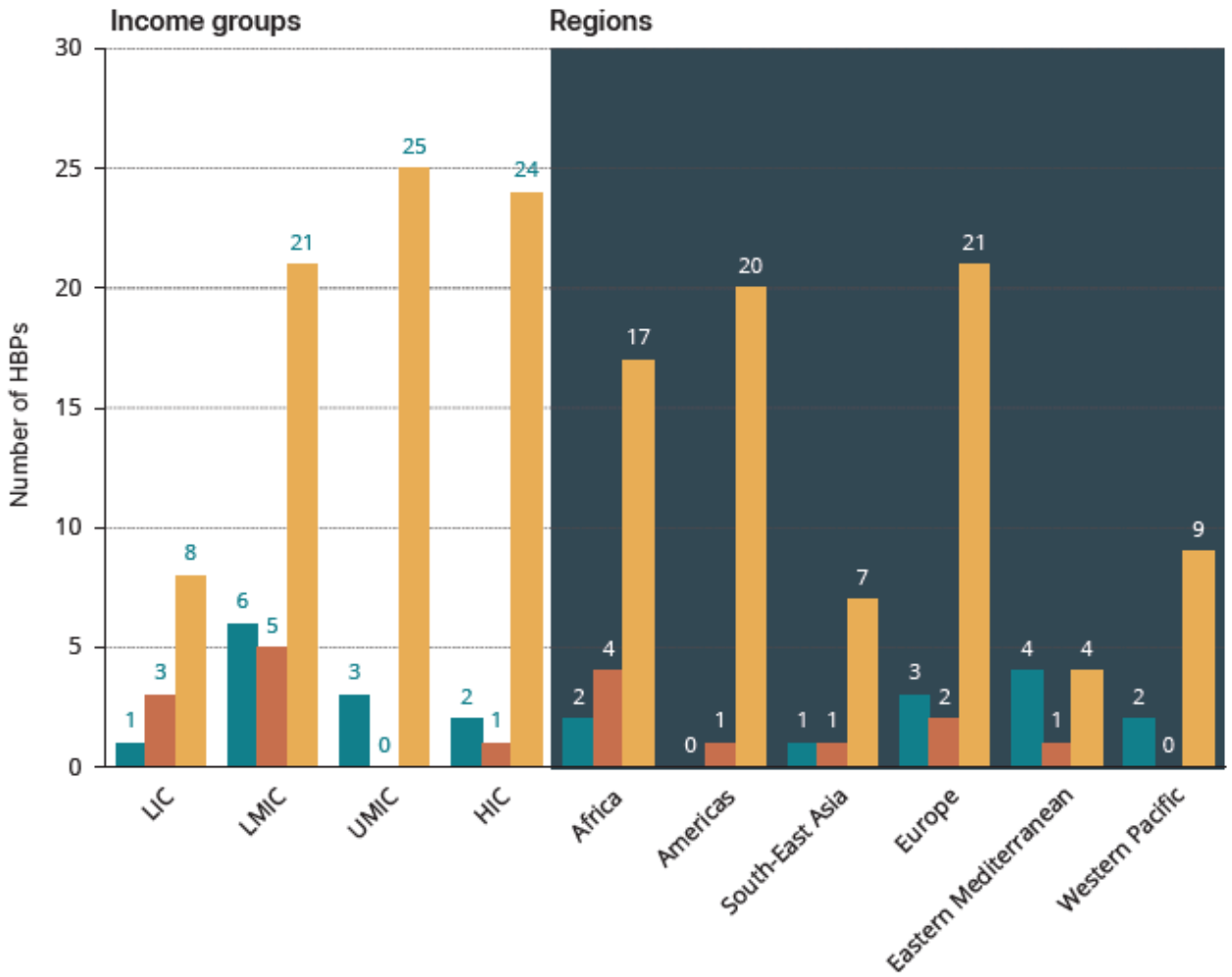

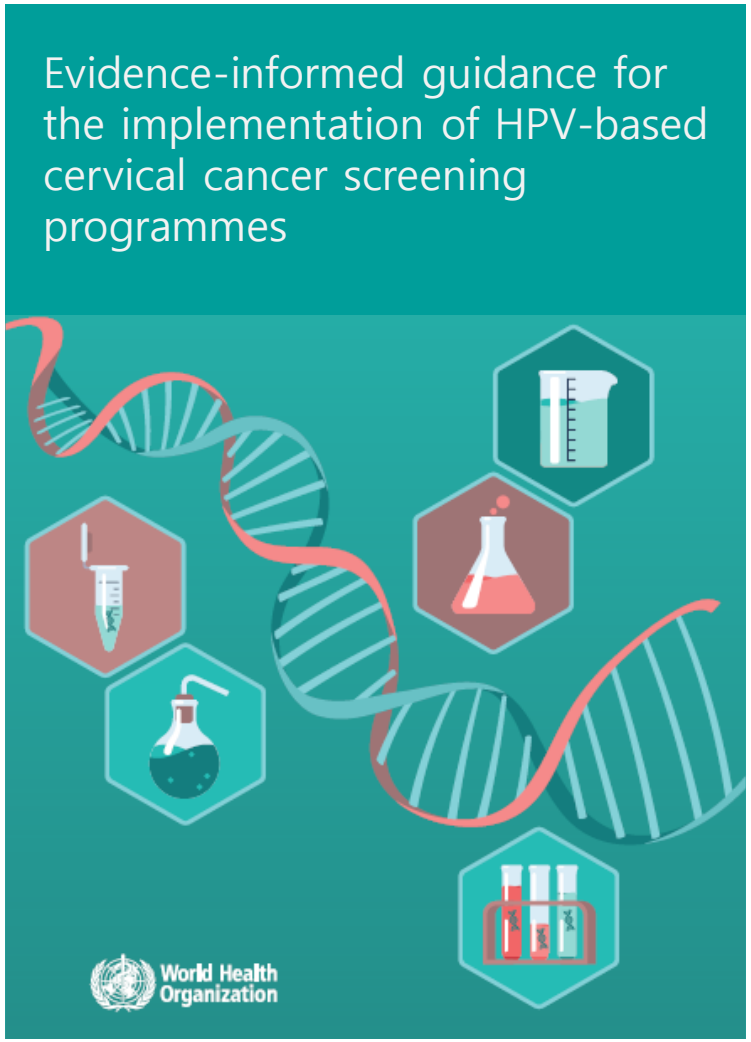

Evidence-informed guidance for the implementation of HPV-based cervical cancer screening programmes

June 2026

https://www.who.int/initiatives/cervical-cancer-elimination-initiative

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From PICO questions to implementation outcomes

GDG PICO QUESTIONS

- What are the effects of health-system interventions to enable the adoption, implementation and scale-up of effective screening approaches?
- What are the effects of provider-targeted strategies to support the adoption of screening approaches and follow-up care?
- What are the effects of patient-targeted strategies to support uptake of screening approaches and follow-up care?

- *Adoption of screening and treatment guidelines:* intention, initial decision, or action to try or employ the guidelines on screening and treatment of precancer lesions to prevent cervical cancer within a screening programme
- *Implementation uptake:* proportion of women in the general population and women living with HIV attending screening services among those targeted by the screening programme
- *Implementation retention:* proportion of women attending screening who complete the screening continuum; including triage, treatment and follow-up pathways
- *Sustainment and scale-up:* the extent to which the screening programme aligned with WHO guidelines is maintained and scaled-up within the health system

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Documenting/ assessment tool

- ✓ Helps to plan and evaluate the effect of using a strategy on implementation outcomes
- ✓ First attempt to document implementation strategies effect on implementing and scaling-up HPV testing, serving as a systematic collection of "lessons learnt"

Box 1. Strategies/ Interventions promoting adoption of cervical cancer screening and management guidelines	Not using	Planning to implement	Implementing	Planning to scale-up
Targeting Healthcare system-level				
1. Establishing national or healthcare system directives, mandates or guidelines				
2. Aligning national guidelines with WHO guidelines				
3. Generating local evidence for implementation through pilot/demonstration projects				
4. Engaging multi-sectoral partners (i.e., lab, community organizations) in implementation efforts				
5. Establishing academic partnerships to evaluate implementation efforts				
6. Engage in public private partnerships to support implementation efforts				
7. Securing external funding for implementation efforts				
8. Inviting external facilitators or consultant to engage in implementation efforts				
9. Supporting in-country champions to lead implementation efforts				
10. Conducting a phased implementation to support scale-up				
11. Provide trainings and technical assistance to support implementation efforts				
12. Conducting cost-effectiveness or situational analyses studies to assist implementation efforts				
13. Demonstrate the feasibility for implementation efforts				
14. Leveraging discussion around HPV vaccination program to promote adoption of screening services				
15. Integrating screening service delivery with ongoing clinical services (i.e., maternal health)				
Targeting Provider-level				
16. Incentivizing provider for delivery of screening and management clinical services				
17. Leveraging international experts and organizations to promote acceptability among providers				
18. Promoting engagement among in-country experts and professional organizations				
19. Reminding providers to offer screening services				
20. Conducting an audit and feedback of provider performance to improve implementation				
21. Training providers for implementing screening and management services				
22. Shifting clinical management tasks to members of team to improve efficiency				
23. Creating clinical service delivery teams with roles and responsibilities				

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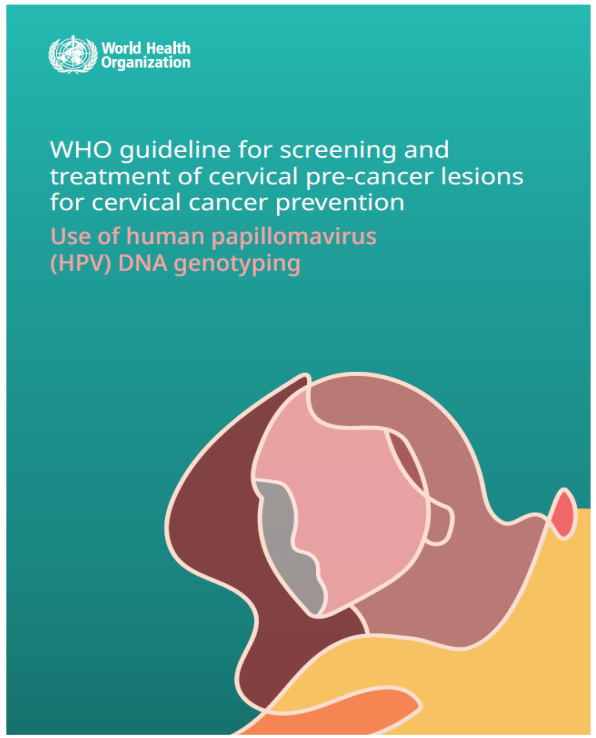
WHO guideline for cervical cancer screening
Use of HPV DNA genotyping



This guideline has two objectives:

1. To provide evidence-based recommendations for the use of HPV DNA tests according to level of genotyping in a screening strategy

2. To support countries and national screening programmes in selecting screening and treatment strategies suitable to their context to prevent cervical cancer in the general population of women

https://iris.who.int/items/7eac93e4-6d76-4d5f-a32d-9fd4c43fd3a7

Some nomenclature changes

2021 guideline	2026 guideline	Description
Screen-and-treat	TREAT ALL HPV POSITIVE women	TREAT ALL women positive to any carcinogenic HPV type (cHPV): groups 1a, 1b, 1c, 1d
Screen, triage and treat	TRIAGE ALL HPV POSITIVE women	TRIAGE ALL women positive to any cHPV (groups 1a, 1b, 1c, 1d) with VIA, colposcopic impression, cytology or dual-stain cytology
Partial genotyping	Limited genotyping	Individual identification of women positive to HPV16 and HPV 18 (± HPV45), will all other cHPV pooled (31, 33, 35, 52, 58; 39, 51, 56 y 59)

Some considerations – HPV test in use

HPV testing in primary screening

- HPV DNA is the recommended primary screening test since 2013
- HPV mRNA detection may also be used rather than VIA or cytology

Group 1a: HPV16
Group 1b: HPV18, 45
Group 1c: HPV31, 33, 35, 52, 58
Group 1d: HPV39, 51, 56, 59

HPV DNA genotyping output

- Different levels of genotyping – including no genotyping - available in countries
- Recommendations on the preferred genotyping strategies based on programme follow-up capacity

HPV DNA genotyping output

- No genotyping: pos/neg result with no individual identification of cHPV types
- Limited genotyping separately HPV16/18±45 (groups 1a and 1b), non HPV16/18 cHPV types pooled
- Extended genotyping separately groups 1a and 1b, different combinations of cHPV in groups 1c and 1d
  - Programmes using extended genotyping should first assign HPV result outputs to cHPV groups
  - If an output matches multiple groups, it should be assigned to the highest relevant cHPV risk group
- While limited and extended genotyping tests provide results to differentiate cHPV types, the result can also be considered as a pooled positive/negative result, as in no genotyping

Some considerations – Treatment and follow-up

Treatment type

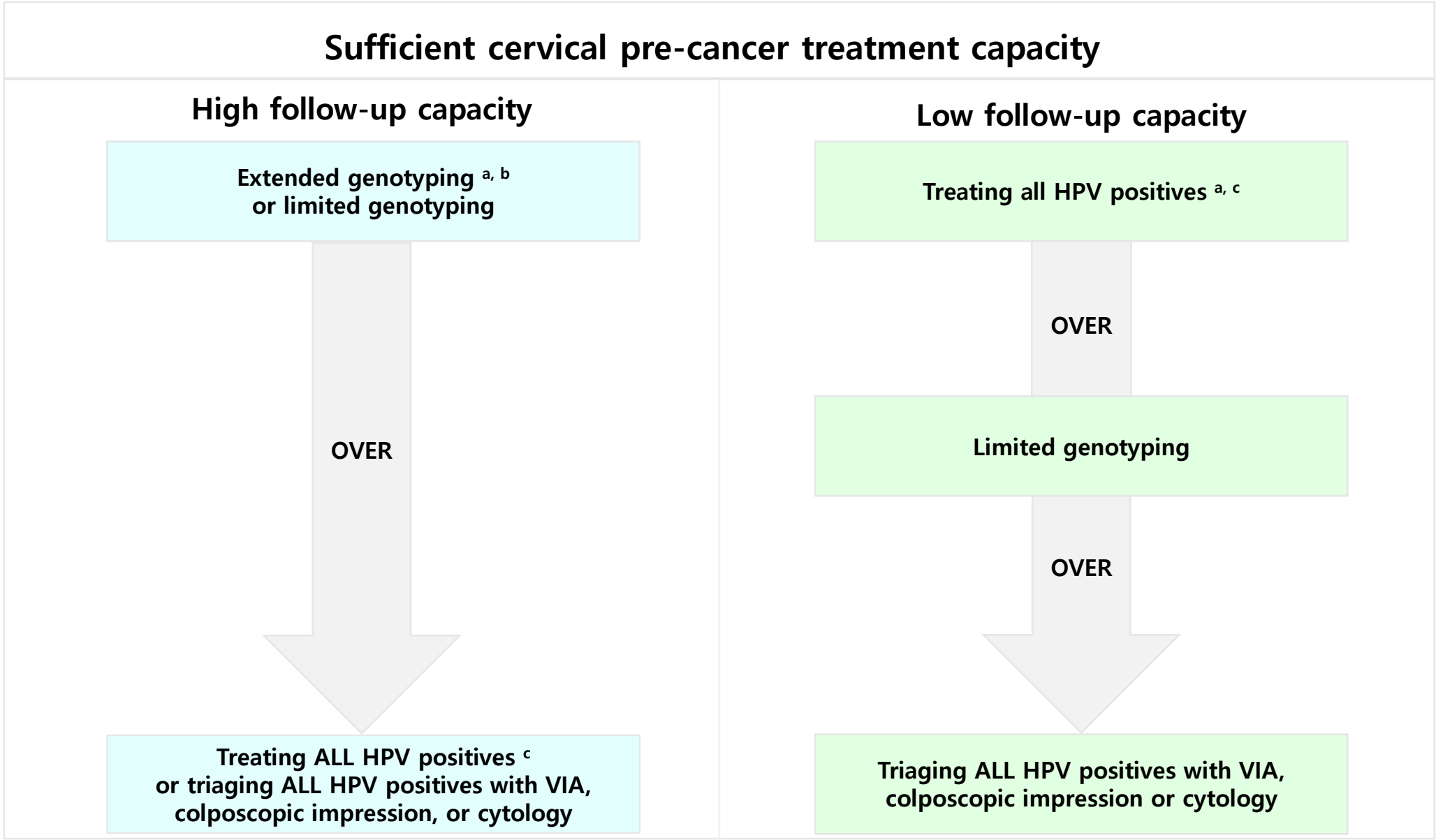
- Each suggested screening strategy includes ablative treatment (AT) for HPV-positives/triaged positives
- Each woman should be visually assessed to determine eligibility for AT
  - Assessment can be performed with or without a colposcope
  - Visually assessing eligibility for AT differs from using VIA to triage women who are HPV positive
  - HPV-positives or triaged positives not eligible for AT should receive excisional treatment

Treatment capacity

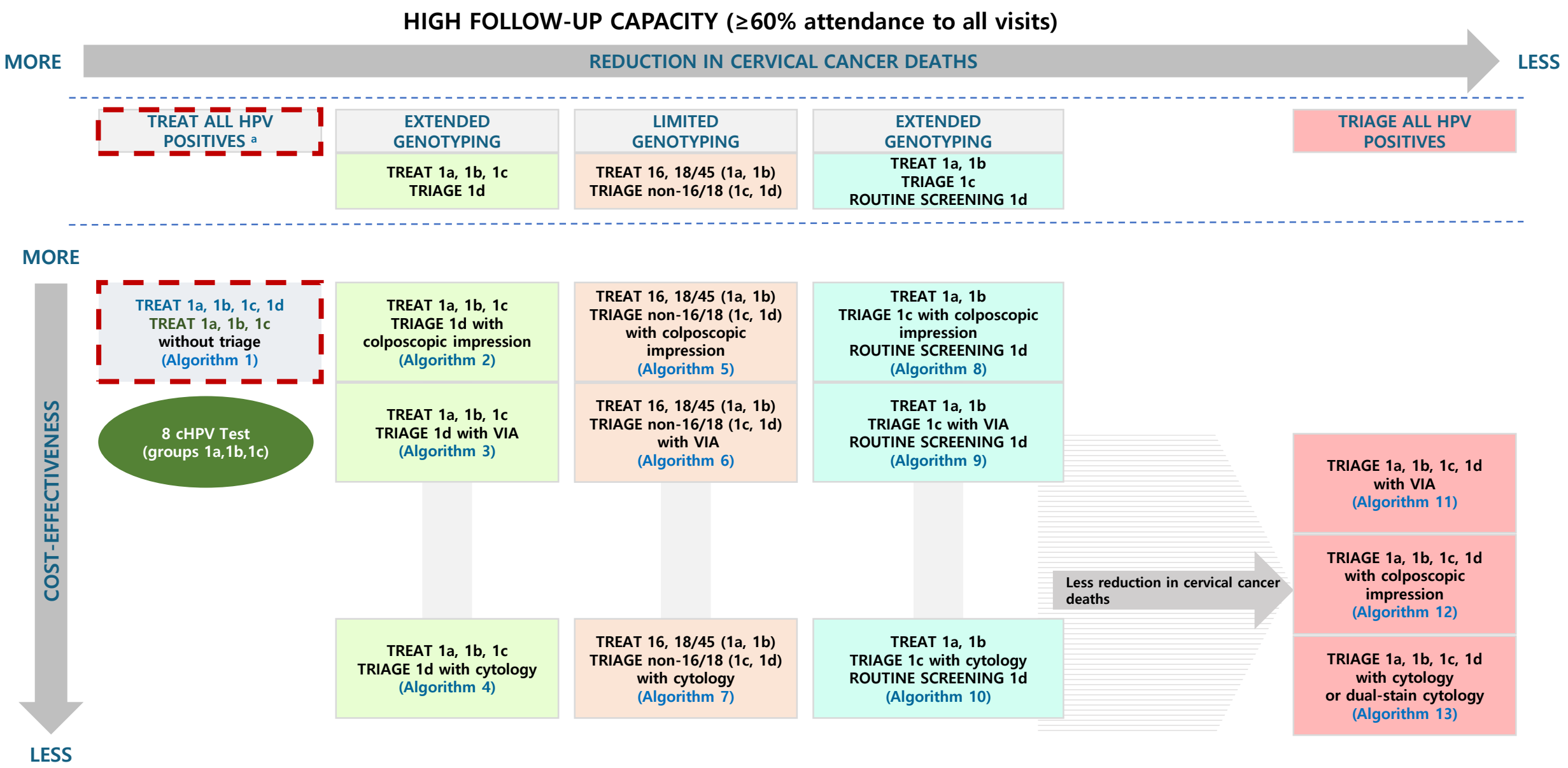
- Programmes should establish adequate treatment capacity before starting screening

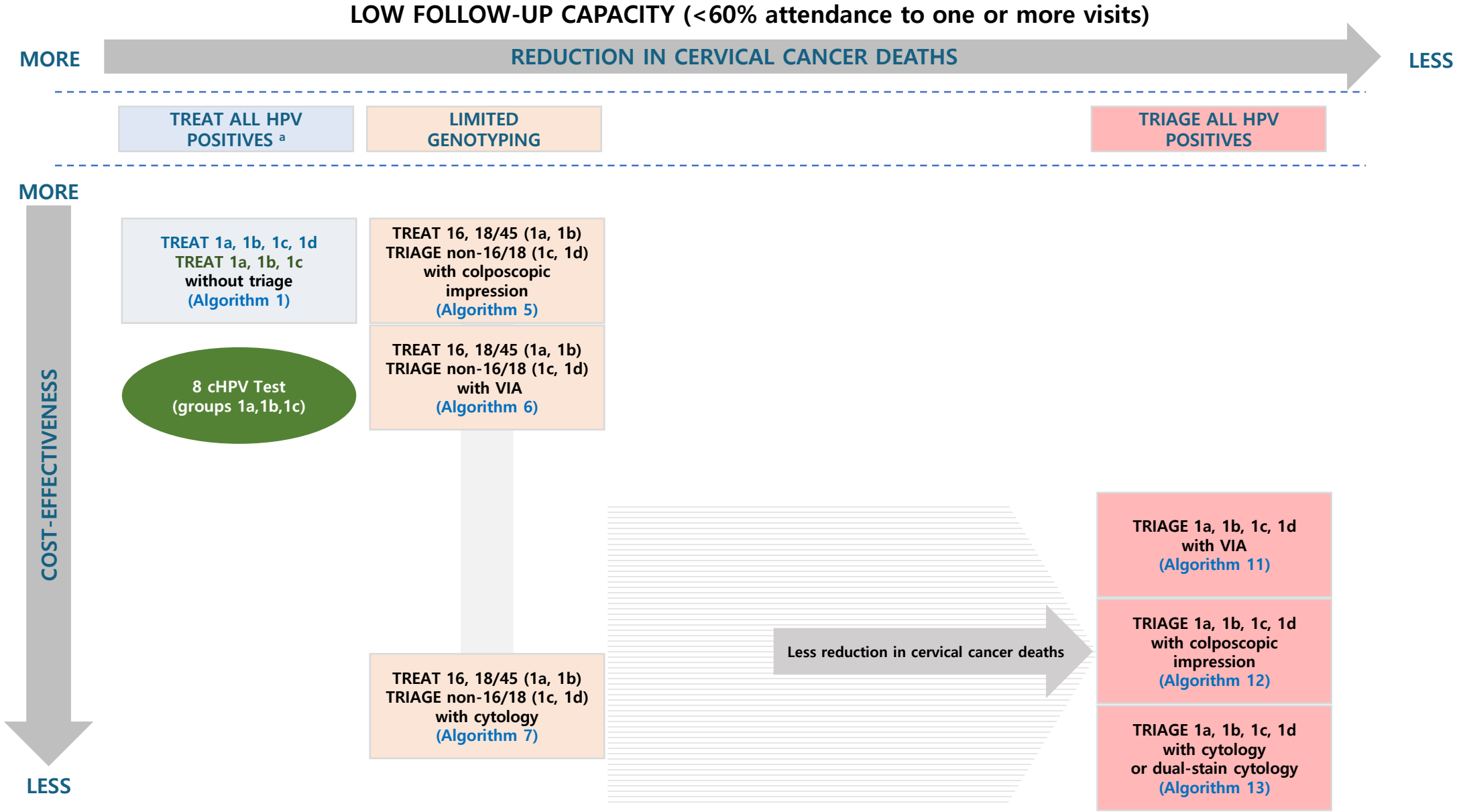
Follow-up capacity

- Decision-makers should assess programme's readiness to complete subsequent screening steps
- High follow-up capacity => ≥60% completion at ALL steps in the continuum (<40% LFUP at ALL steps)
- Low follow-up capacity => <60% completion (≥ 40% LFUP at any step)
  - ❖ Failure to reach 60% at a single step is sufficient to consider it as low
- Determining follow-up capacity critical: avoiding leaving women with untreated lesions that may progress to cancer and impacting programme efficiency and cost-effectiveness



[a] See recommendations and algorithms for strategies that are recommended
[b] Extended or limited genotyping was preferred over other strategies because it reduces the number of pre-cancer treatments and overtreatment
[c] Identifying ALL HPV positives can be done using no genotyping tests (positive/negative result), limited or extended genotyping tests (using a pooled-positive/negative result instead of differentiated outputs). No genotyping and limited genotyping tests can target 12 cHPV types (groups 1a, 1b, 1c, 1d) or 8 cHPV types (groups 1a, 1b, 1c) when available


HIGH FOLLOW-UP CAPACITY (≥60% attendance to all visits)
MORE
REDUCTION IN CERVICAL CANCER DEATHS
LESS
TREAT ALL HPV POSITIVES a
EXTENDED GENOTYPING
TREAT 1a, 1b, 1c
TRIAGE 1d
LIMITED GENOTYPING
TREAT 16, 18/45 (1a, 1b)
TRIAGE non-16/18 (1c, 1d)
EXTENDED GENOTYPING
TREAT 1a, 1b
TRIAGE 1c
ROUTINE SCREENING 1d
TRIAGE ALL HPV POSITIVES
MORE
COST-EFFECTIVENESS
LESS
TREAT 1a, 1b, 1c, 1d
TREAT 1a, 1b, 1c
without triage
(Algorithm 1)
8 cHPV Test
(groups 1a,1b,1c)
TREAT 1a, 1b, 1c
TRIAGE 1d with colposcopic impression
(Algorithm 2)
TREAT 16, 18/45 (1a, 1b)
TRIAGE non-16/18 (1c, 1d)
with colposcopic impression
(Algorithm 5)
TREAT 1a, 1b
TRIAGE 1c with colposcopic impression
ROUTINE SCREENING 1d
(Algorithm 8)
TREAT 1a, 1b, 1c
TRIAGE 1d with VIA
(Algorithm 3)
TREAT 16, 18/45 (1a, 1b)
TRIAGE non-16/18 (1c, 1d)
with VIA
(Algorithm 6)
TREAT 1a, 1b
TRIAGE 1c with VIA
ROUTINE SCREENING 1d
(Algorithm 9)
TREAT 1a, 1b, 1c
TRIAGE 1d with cytology
(Algorithm 4)
TREAT 16, 18/45 (1a, 1b)
TRIAGE non-16/18 (1c, 1d)
with cytology
(Algorithm 7)
TREAT 1a, 1b
TRIAGE 1c with cytology
ROUTINE SCREENING 1d
(Algorithm 10)
Less reduction in cervical cancer deaths
TRIAGE 1a, 1b, 1c, 1d
with VIA
(Algorithm 11)
TRIAGE 1a, 1b, 1c, 1d
with colposcopic impression
(Algorithm 12)
TRIAGE 1a, 1b, 1c, 1d
with cytology
or dual-stain cytology
(Algorithm 13)


LOW FOLLOW-UP CAPACITY (<60% attendance to one or more visits)
MORE
REDUCTION IN CERVICAL CANCER DEATHS
LESS
TREAT ALL HPV POSITIVES a
LIMITED GENOTYPING
TRIAGE ALL HPV POSITIVES
MORE
COST-EFFECTIVENESS
LESS
TREAT 1a, 1b, 1c, 1d
TREAT 1a, 1b, 1c
without triage
(Algorithm 1)
8 cHPV Test
(groups 1a,1b,1c)
TREAT 16, 18/45 (1a, 1b)
TRIAGE non-16/18 (1c, 1d)
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(Algorithm 7)
Less reduction in cervical cancer deaths
TRIAGE 1a, 1b, 1c, 1d
with VIA
(Algorithm 11)
TRIAGE 1a, 1b, 1c, 1d
with colposcopic impression
(Algorithm 12)
TRIAGE 1a, 1b, 1c, 1d
with cytology
or dual-stain cytology
(Algorithm 13)

WHO country support as requested by countries

Incidence ASR<10.0

Mongolia, Philippines, Cambodia, Morocco, Nepal

Incidence ASR 10-20

Nigeria, PNG, Ethiopia, South Africa, Bhutan, Sierra Leone, Vanuatu

Incidence ASR 20+

Fiji, Madagascar, Solomon Islands, Rwanda, Namibia, Malawi, Mozambique, Zambia

Type of request	# countries
Procurement	17
Capacity building	12
Planning	10
Screening implementation	10
Awareness	6
Guidelines	6
Engagement with MoH, partnership	5
Investment cases, market shaping	5
Laboratory QA	4
M & E	4

In summary

- Cervical cancer incidence and mortality rates remain high
- 80% of countries have screening guidelines
- Screening coverage up to 2022 with any technique is about 35%, and less than 10% with HPV testing
- Implementation of HPV-based cervical cancer screening slowly increasing
- Countries request support mainly for procurement of treatment devices and for building treatment capacity, less on guidelines, QA and M&E
- New HPV genotyping guideline is summarised in 3 recommendations for the general population of women, describing preferred screening strategies (14 algorithms) under varying resource conditions
- Health system readiness, including the installed capacity to offer screening, triage, treatment and follow-up, should be evaluated before deciding on the screening approach and strategies to be implemented
- Choice between strategies should be done considering the installed capacity to ensure HPV positive women complete the screening cycle:
  - Mechanisms to properly inform; call and recall women
  - Available and working triage and treatment services
  - Established referral pathways and systems for clinical management
  - Information system that support the screening process, including regular monitoring and reporting

Elimination of cervical cancer is commitment we make to all women and girls – to spare millions from the harms of a preventable cancer

Thanks to the GDG, HPV TPPs TDG, WHO Secretariat, CCEI and Cancer team, and multiple collaborators

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and to Nancy Santesso, Linda Eckert, Nathalie Broutet, Karel Blondeel, Mathilde Forestier and Mariluz Hernández

Many thanks to all sponsors and to all who support the Cervical Cancer Elimination Initiative in any way, every action counts