

Worldwide use of HPV self-sampling for cervical cancer screening

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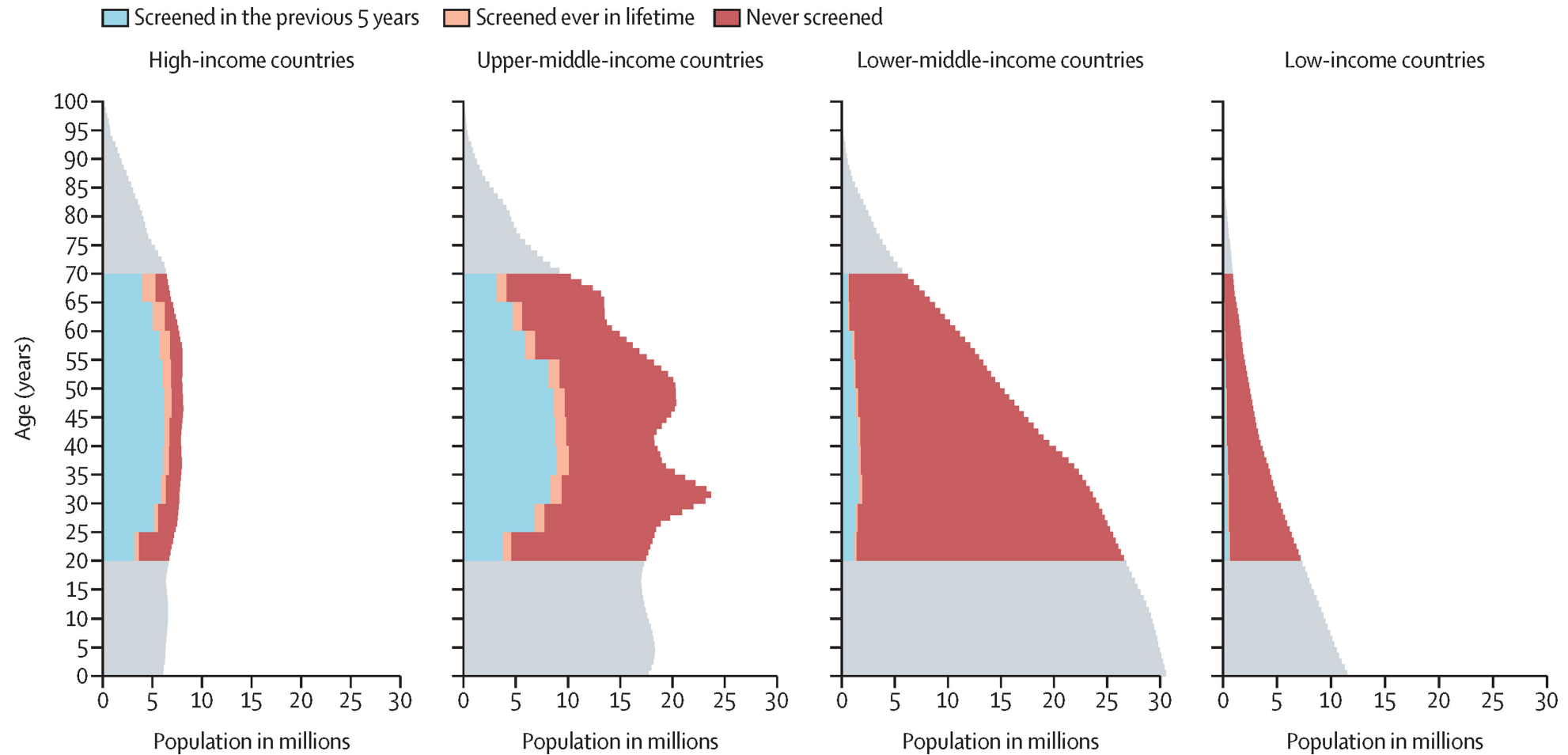
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Cervical cancer elimination targets – June 2023



- HPV vaccination is far from 90% coverage
- **Screening has barely started in many world regions, far from a global 70% coverage**
- Treatment coverage is largely unknown

Screening of under/never screened women is a critical step against cervical cancer



Bruni, Serrano et al. *Lancet Global Health* 2022

Benefits of HPV self-sampling

- ✓ **Acceptability** of the population and providers

A significant increase in uptake has been observed when comparing self-sampling with clinician-collected samples, regardless of the invitation strategy used.

- ✓ **Accuracy** in detecting CIN2+

- ✓ **Feasibility** of implementation and management of HPV+

- ✓ **Effectiveness** in reducing disease burden in the population

Ping Teresa Yeh et al. *BMJ Global Health* 2019

Di Gennaro et al. *Front Public Health* 2022

Costa et al. *Br J Cancer* 2023

Benefits of HPV self-sampling

- ✓ **Acceptability** of the population and providers
- ✓ **Accuracy** in detecting CIN2+

The clinical accuracy of HPV testing on self-collected samples for detection of CIN2+ is high. A slight loss in sensitivity has been observed as compared to provider-collected samples and optimization steps have been identified.

- ✓ **Feasibility** of implementation and management of HPV+
- ✓ **Effectiveness** in reducing disease burden in the population

Arbyn et al. *BMJ* 2018
Inturrisi et al. *Lancet Reg Health Europe* 2021
Rebolj et al. *Int J Cancer* 2022

Benefits of HPV self-sampling

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- ✓ **Accuracy** in detecting CIN2+
- ✓ **Feasibility** of implementation and management of HPV+

The implementation of self-sampling has challenges (e.g., training of healthcare workers and laboratory technicians, sample transportation, follow-up of positive women), but several real-world examples have shown its feasibility.

- ✓ **Effectiveness** in reducing disease burden in the population

Holme et al. *Prev Med* 2020
Inturrisi et al. *Lancet Reg Health Europe* 2021
Woo et al. *Curr Oncol* 2022

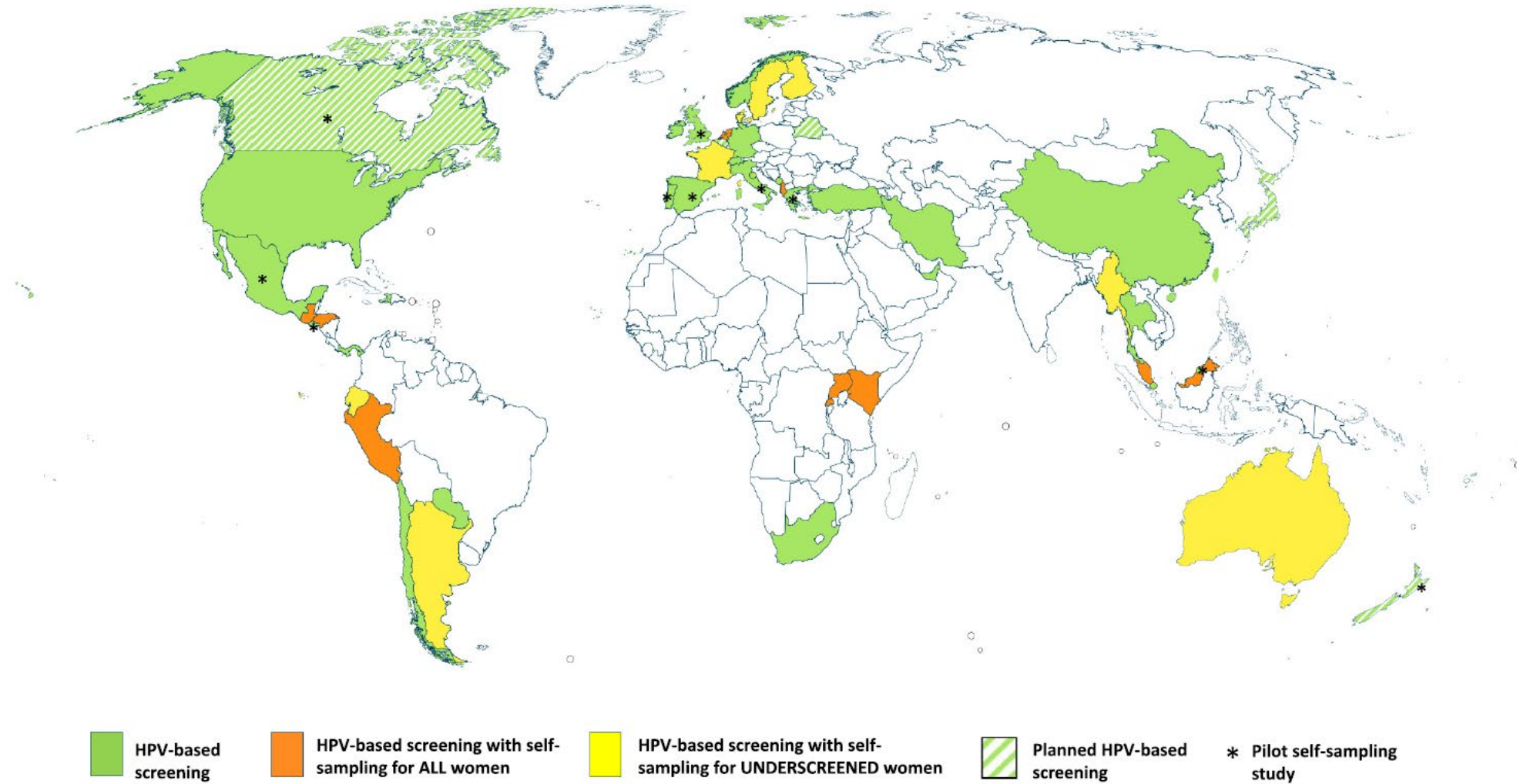
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Self-collected HPV testing has been identified as a cost-effective strategy when it yields population coverage gains.

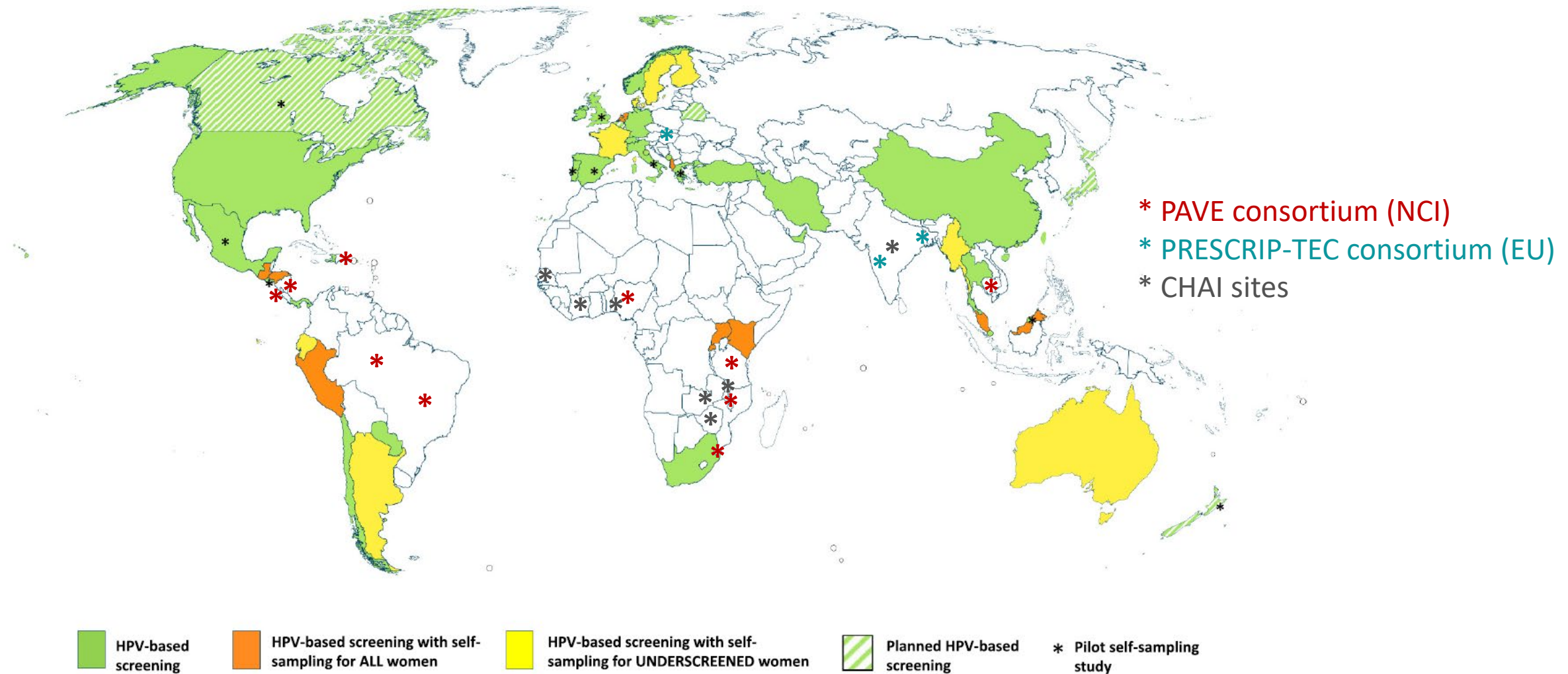
Mezei et al. *Int J Cancer* 2017
Mezei et al. *BMJ Open* 2018

Use of self-sampling in HPV-based programs – February 2021



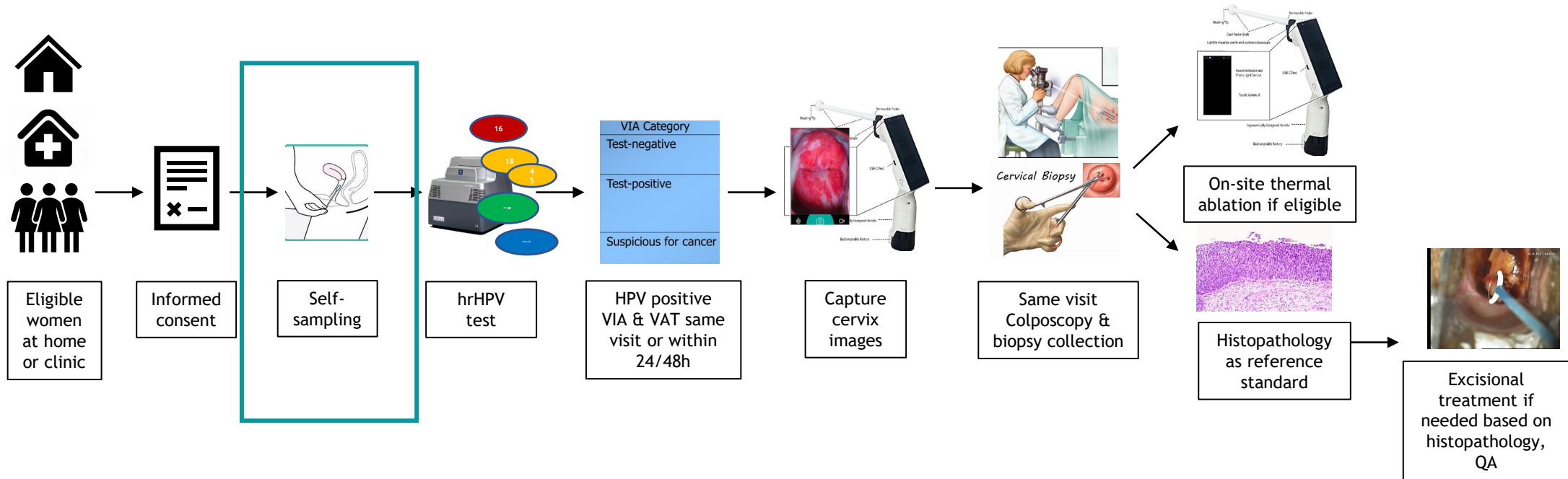
Serrano et al. *Prev Med* 2022

Use of self-sampling in HPV-based programs – June 2023



Adapted from: Serrano et al. *Prev Med* 2022

The PAVE study to support WHO elimination targets



PAVE consortium:
100,000 women across 9 LMICs



UPDATE MAY 2023:
4/9 countries actively recruiting (DR, El Salvador, Cambodia, Brazil) with successful uptake of self-sampling

The PAVE study: offering HPV self-sampling to ALL

- ✓ **At the clinic** - reproductive and HIV clinic
- ✓ **At work** (e.g., factories in Cambodia)
- ✓ **In the community** (e.g., El Salvador, Nigeria, Malawi, Eswatini, Tanzania – RCT recruitment strategies: Individual (market, hair saloon) VS group (faith-based, women cooperative))

Further considerations on quality of self-sampling

Optimizing accuracy is possible but ongoing monitoring and careful evaluations are needed.

- Number of invalid results
- Impact of the type of collection device
- Impact of sample collection method
- Impact of the type of HPV test (e.g., contamination and number of repeat tests needed)
- Impact of the sample dilution and processing (e.g., in some low-resource settings, high temperatures and time of sample processing >24 hours)
- SOPs of validated HPV technologies do not always provide an adaptation for self-sampling approaches (off-label use)

Thanks to all my colleagues of the PAVE consortium

Special thanks to:

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Mark Schiffman



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