UNIVERSITY OF KWAZULU-NATAL ™

INYUVESI YAKWAZULU-NATALI

Cervical cancer National eradication plan

AWACC – 30 October 2026

Prof HM Sebitloane





ELIMINATION OF CERVICAL CANCER IN SOUTH AFRICA:

A STRATEGIC AND IMPLEMENTATION FRAMEWORK 2026 – 2030

health
Department:
Health
REPUBLIC OF SOUTH AFRICA

2030 NDP

Cervical Cancer: Why it matters

Key Facts

- One of the most preventable cancers - Approximately 600,000 new cases annually worldwide
- Over 340,000 deaths annually
- Caused primarily by persistent high-risk HPV infection
- Major burden in LMIC's
- Strongly associated with HIV infection
- Significant public health problem in South Africa

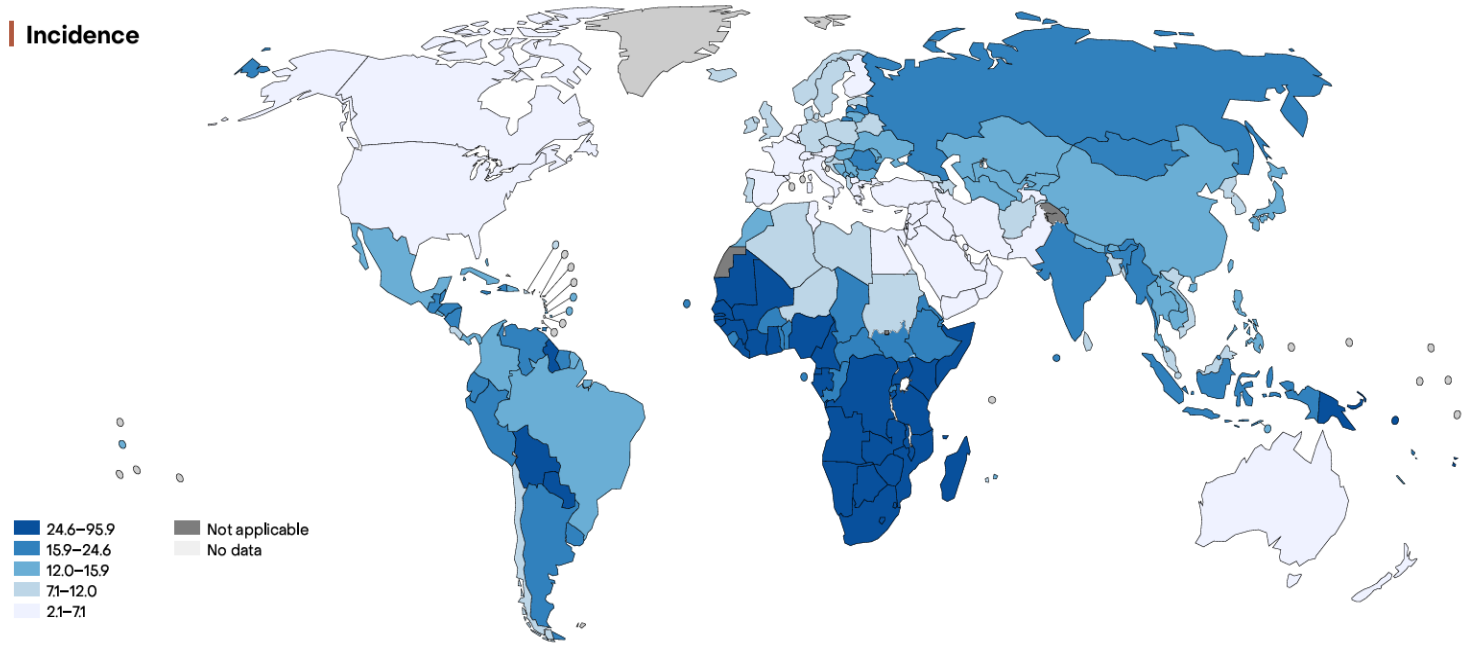
Key Message

Most cervical cancer deaths are preventable through:
HPV vaccination
Screening
Early treatment

Because it is highly preventable, it can be eliminated

Global burden of cervical cancer (2020)

- Cervical cancer was the 4th most common cancer in women.
- Cervical cancer was the 2nd most common cancer in women aged 15–44 years.
- Approx 600,000 new cases worldwide and >340 000 deaths annually



1. Human Papillomavirus and Related Diseases in the World. Summary Report 10 March 2023. https://hpvcentre.net/statistics/reports/XWX.pdf; accessed 20 Jun, 2025
2. Image: 23-cervix-uteri-fact-sheet.pdf; accessed 20 Jun, 2025

Cervical cancer incidence in SA

- About 10,702 new cervical cancer cases are diagnosed annually in SA (estimations for 2020).
- Cervical cancer ranks as the 2nd leading cause of female cancer in SA but the 1st most common female cancer in women aged 15 to 44 years
- According to the latest edition of the National Cancer Registry (2024) the following number of cervical cancer cases was histologically diagnosed in SA during 2024:

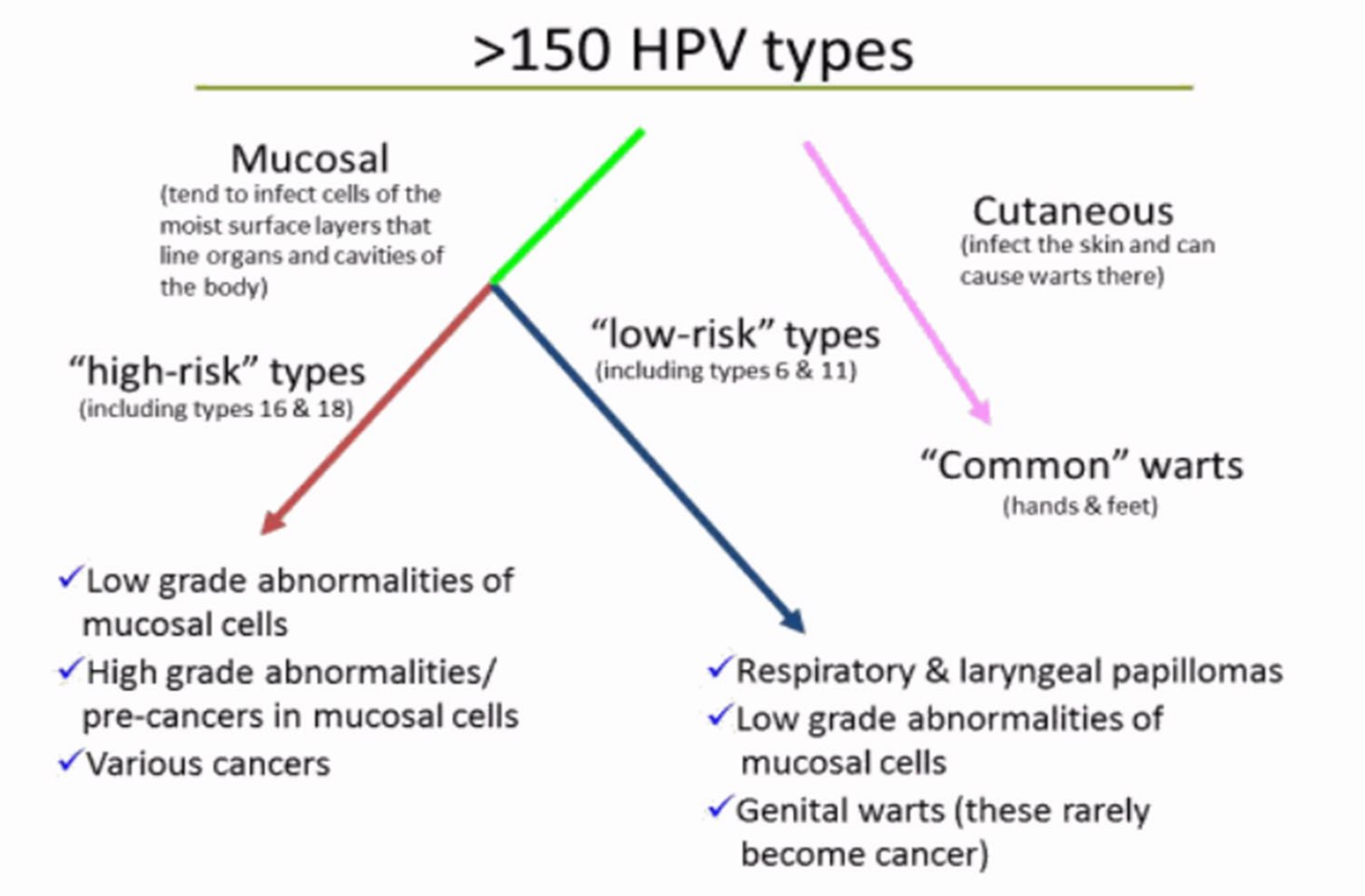
Cervical cancer in South Africa by race (latest NCR 2023 data)

Population group	Number of diagnosed cervical cancer cases (2023)	Estimated lifetime risk
Black females	6,511	1 in 35
Coloured females	433	1 in 72
White females	587	1 in 57
Asian/Indian females	113	1 in 96
All females	7,644	1 in 41

1. South Africa: Human Papillomavirus and Related Diseases, Summary Report 2023; https://hpvcentre.net/statistics/reports/ZAF.pdf?t=1750418492862;
2. CANSA-Fact-Sheet-on-Cervical-Cancer-NCR-2024-website-April-2024.pdf

HPV and Cervical Cancer

- Human Papillomavirus (HPV) is a group of more than 200 related viruses.
- Leading cause of several cancers, including cervical, anal, oropharyngeal, penile, vulvar, and vaginal cancers.
- Low-risk and high-risk HPV types.
- High-risk HPV types (e.g., HPV 16, 18) are responsible for the majority of HPV-related cancers.



HPV and cervical cancer 2

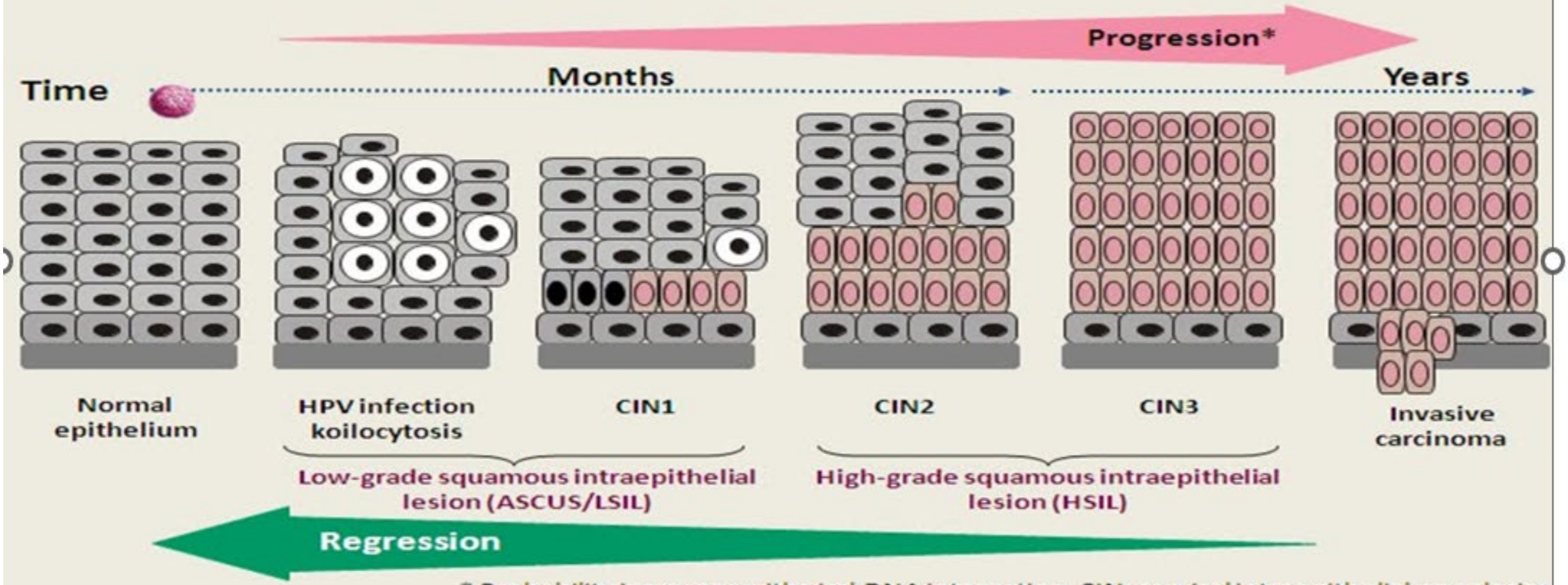
- Persistent HPV infection causes most cervical cancers
- HPV 16 and 18 responsible for majority of cases
- Risk Factors
  - HIV infection
  - Smoking
  - Early sexual activity
  - Multiple sexual partners
  - Immunosuppression

WHO 2024 Target Product Profiles stratify the 12 IARC Group 1 carcinogenic HPV types into four subgroups:

- **Group 1a** (HPV16), (- 60%)
- **Group 1b** (HPV18 and HPV45), - (20%)
- **Group 1c** (HPV31, 33, 35, 52, and 58), (15%)
- **and Group 1d** (HPV39, 51, 56, and 59) – (5%)

these 12 types account for more than 98% of cervical cancers globally,

Progression of cervical disease after HPV infection



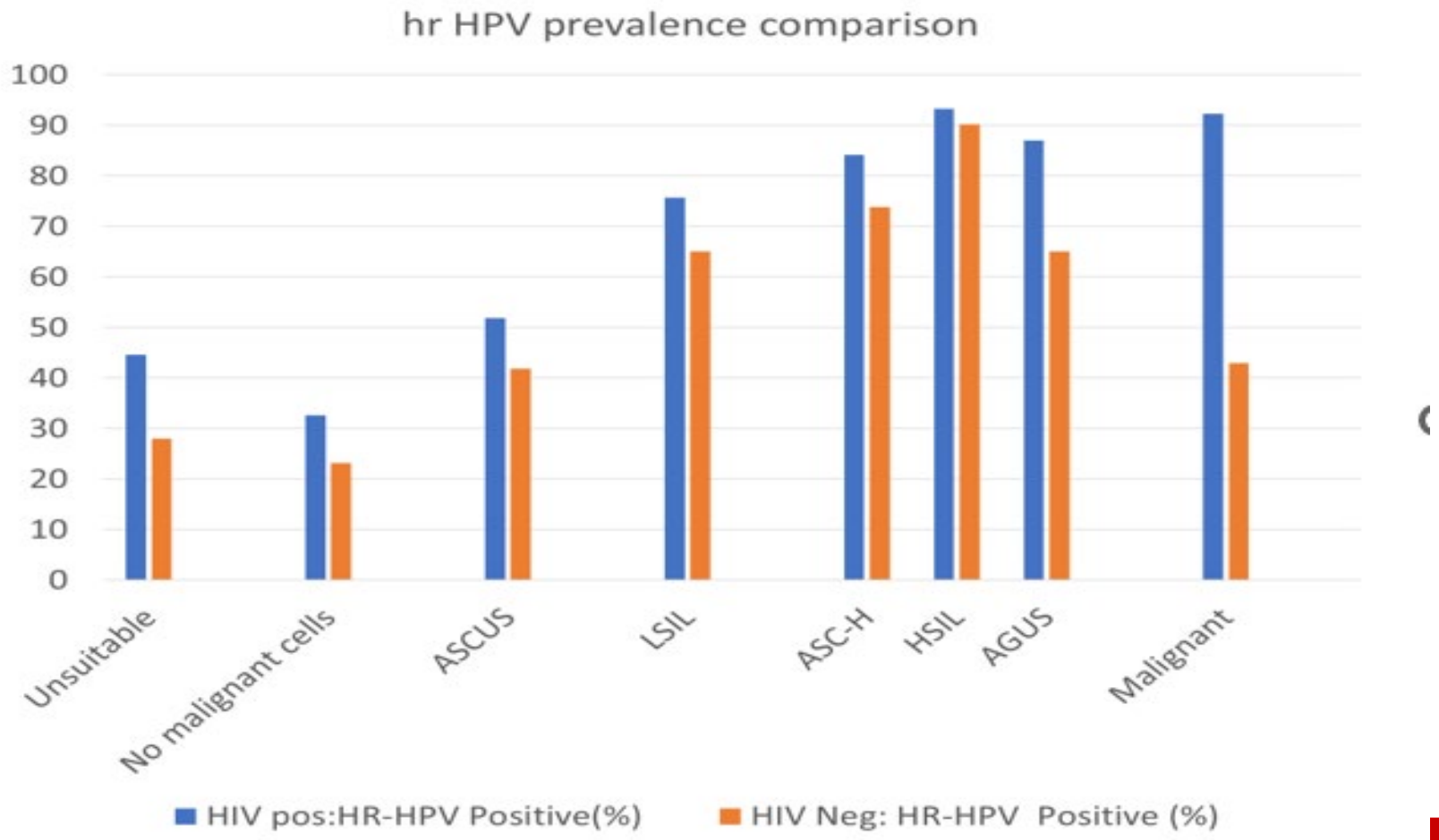
* Probability increases with viral DNA integration. CIN: cervical intraepithelial neoplasia; ASCUS: atypical squamous cells of undetermined significance

Burd EM. *Clin Microbiol Rev* 2003; **16**:1–17; Solomon D, *et al. JAMA* 2002; **287**:2114–2119.

HPV infection increases HIV acquisition

- Genital **HPV infection increases the biological risk for HIV acquisition**
  - Denny *et al. Vaccine* 2012;**30s**
- **Risk of HIV acquisition doubled** in women with HPV infection with any genotype
  Houlihan et al. AIDS 2012;26
- HIV acquisition in women associated with any HPV infection and hrHPV types
  Lissouba Sexually Transm Infect. 2013; 89(5

HPV prevalence according to HIV status and cervical cytology



Preliminary data from national HPV screening pilot

WHO global cervical cancer elimination strategy

Definition of the Elimination Threshold - What Does Elimination Mean?

- Important milestone - Eliminate cervical cancer as a public health problem
- First cancer targeted for elimination globally
- WHO Definition of Elimination = <4 cases per 100,000 women-years

Important Distinction

Elimination ≠ eradication (disease still exists but at very low levels)

- Reasons:
  - HPV remains widespread globally
  - Existing adult HPV infections
  - Incomplete vaccination coverage
  - Unequal healthcare access
  - Persistent social and healthcare inequalities

Therefore:
WHO elimination is a realistic, measurable public health target

Global strategy to accelerate the elimination of cervical cancer

VISION: A world without cervical cancer

THRESHOLD: All countries to reach < 4 cases 100,000 women years

2030 CONTROL TARGETS

HPV vaccination estimated to avert > 45M deaths over next 100 years

90% of girls fully vaccinated with HPV vaccine by 15 years of age

70% of women screened with a high precision test at 35 and 45 years of age

90% of women identified with cervical disease receive treatment and care

SDG 2030: Target 3.4 – 30% reduction in mortality from cervical cancer

Current status of SA and the elimination threshold

WHO Elimination Goal in SA

- <4 cases per 100,000 women/year
- Approximately 30–40+ cases per 100,000 women/year

Why SA Faces Greater Challenges

- HIV Epidemic
  - Women living with HIV:
  - Higher HPV persistence
  - Faster progression to cancer
  - Earlier onset of disease
  - Higher recurrence rates
- Healthcare Inequities
- Rural access barriers
- Public/private disparities
- Workforce shortages

SA remains far behind in achieving elimination threshold

Vaccine coverage rates: SA

- introduced in 2014, targeting girls aged 9 and 14 years in the poorest 80% of schools,
- First round - in April 2014, 419,520 out of 503,507 eligible Grade 4 girls (aged ≥9 years) were vaccinated with the first dose of the bivalent HPV vaccine, - high coverage rate of 83%.
- The second round, administered 6 months later, reached 65% of the overall proportion of eligible girls.
- Estimated that at least 80% of 9-15yr olds have ben vaccinated by 2023, with expansion to private schools in 2024.

Watson, M. (2023, March 15). In-depth: The state of SA's HPV vaccination programme in 2023. Spotlight.https://www.spotlightnsp.co.za/2023/03/15/in-depth-the-state-of-sas-hpv-vaccination-programme-in-2023/

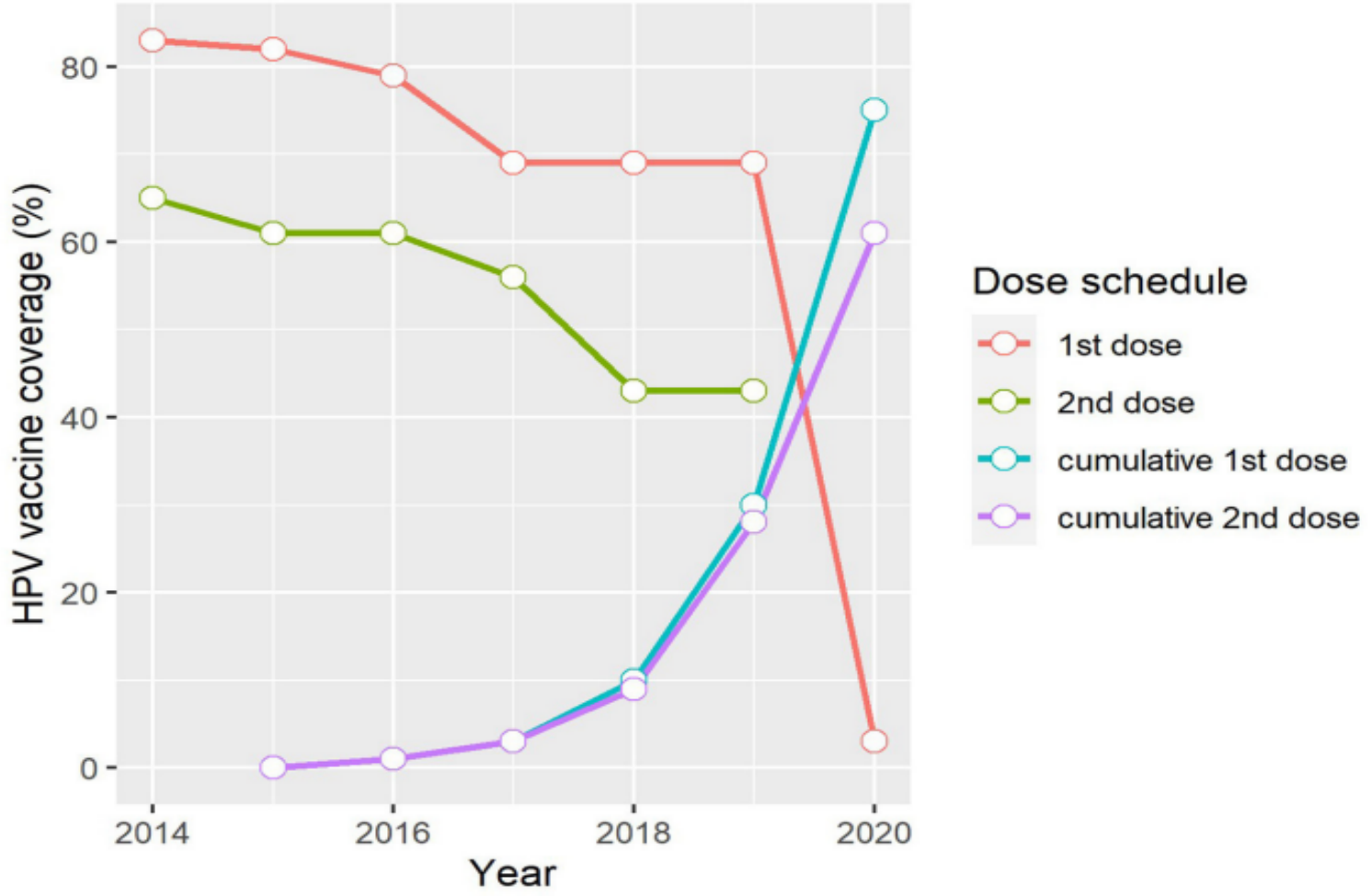


FIGURE 2 | Trends in HPV vaccine coverage in South Africa, 2014–2020 (17). 1st dose, Proportion of the target population who received the first dose of the HPV vaccine in the reporting year. 2nd dose, Proportion of the target population who received the last dose of the HPV vaccine in the reporting year. Cumulative 1st dose, Proportion of the population turning 15 years in the reporting year who received at least one dose of the HPV vaccine any time between ages 9–14 years. Cumulative 2nd dose, Proportion of the population turning 15 years in the reporting year who received the full recommended schedule of the HPV vaccine any time between ages 9–14 years.

Amponsah-Dacosta E, Blose N, Nkwinika VV and Chepkurui V (2022) Human Papillomavirus Vaccination in South Africa: Programmatic Challenges and Opportunities for Integration With Other Adolescent Health Services? Front. Public Health 10:799984. doi: 10.3389/fpubh.2022.799984

Efficacy of 2 dose in SA

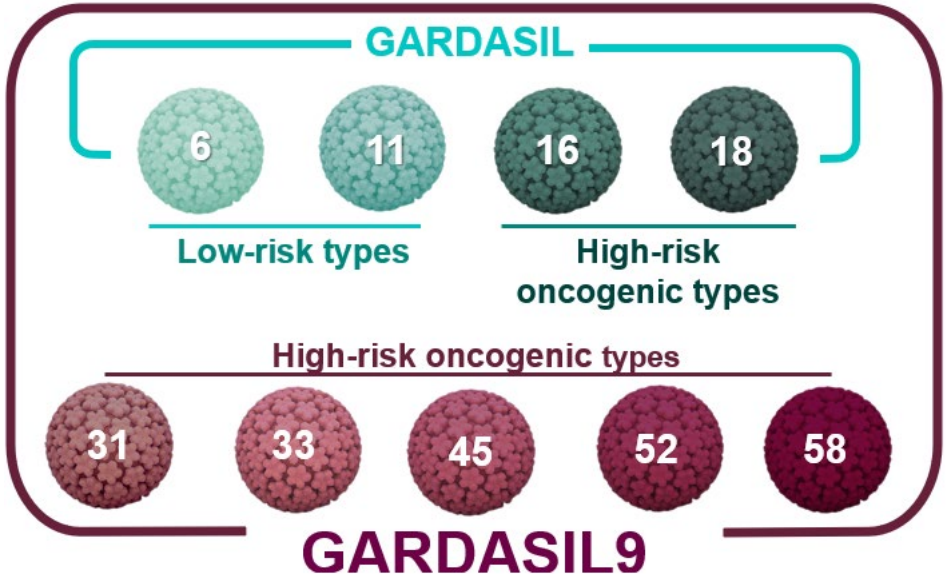
- 2470 participants enrolled, 17-18yr old girls were recruited for the pre-vaccine survey (248 living with HIV) and 1538 for the post-vaccine survey (295 living with HIV) – 63%
- Prevalence of HPV vaccine types HPV-16 and HPV-18 declined by 83%, from 21·6% in the pre-vaccine group to 3·2% in the post vaccine group (APR 0·17, 95% CI 0·12–0·24; p<0·0001).
- A similar reduction was observed among those LHIV, with prevalence decreasing from 29·4% in the pre-vaccine, group to 4·4% in the post-vaccine group (APR= 0·18, 95% CI 0·10–0·32;
- p<0·0001).
- No significant reductions were noted for other HPV types, except HPV-31 and HPV-45, which is consistent with cross-protection

Machalek D, Nyemba D, Travill D et al.
Population impact of South Africa's human papillomavirus (HPV) vaccination programme on HPV prevalence in adolescent girls with and without HIV: a repeat cross-sectional study
The Lancet Global Health, 14, e570-e578

Available and **Recommended in SA**

- 2 valent against HPV 16, 18 (preventing >70% of cancers)
- 4 valent 6, 11, 16 and 18 (preventing >70% of cancers and genital warts)
- 9 valent 6, 11, 16, 18, 31, 33, 45, 52 and 58 (preventing > 90% of cancers and genital warts)





General principle

- **Dosing Schedule - Bivalent:** The standard dosing schedule for Cervarix consists of three intramuscular injections of 0.5 mL each, administered at 0, 1, and 6 months. This schedule is recommended for individuals aged 10 to 25 years.

Population	WHO-recommended HPV vaccine sched
Girls aged 9–14 years	One or two doses
Girls and women aged 15–20 years	One or two doses
Women older than 21 years	Two doses, with a 6-month interval
Immunocompromised individuals, including WLHIV, regardless of age or ART status	**At least two doses; three doses where possible**

World Health Organization. (2022). Human papillomavirus vaccines: WHO position paper, December 2022. Weekly Epidemiological Record, 97, 645–672.

individuals who are immunocompromised or living with HIV receive at least two doses and, where possible, three doses.

Vaccines in PLWHIV

- Studies have demonstrated that HPV vaccines are immunogenic and safe in PLWH - most indiv develop robust antibody responses against HPV vaccine types.
- antibody titres may be lower and decline more rapidly than in HIV-ve individuals, however, seroconversion rates remain high,esp with good immune status on ARV
- 2022 systematic review and meta-analysis found that:
  - More than 94% of PLWH seroconverted after HPV vaccination.
  - Seropositivity for HPV-16 and HPV-18 remained high after 3 doses.
  - Vaccines were considered safe and immunogenic across studies.
  - Concluded - “People with HIV develop a robust initial immune response following HPV vaccination

Losada, C., et al., (2023). Efficacy and durability of immune response after receipt of HPV vaccines in people living with HIV. Vaccines, 11(6), 1067. https://doi.org/10.3390/vaccines11061067

Staadegaard, L., Rönn, M. M., Soni, N., et al., (mmunogenicity, safety, and efficacy of the HPV vaccines among people living with HIV: A systematic review and meta-analysis. eClinicalMedicine, 52, 101585/2022).

Vaccine Goals

- Vaccination of girls in schools is a **good start**
- **Non-gendered** vaccination for children
- **Adult vaccination** (High risk for new HPV infections remains!)
- **Vaccinate at risk people - PLHIV**



Early Detection Saves Lives

Screening

Why the transition from cytology to HPV

HPV testing

- Sensitivity: ~90–95%
- Specificity: ~85–90%

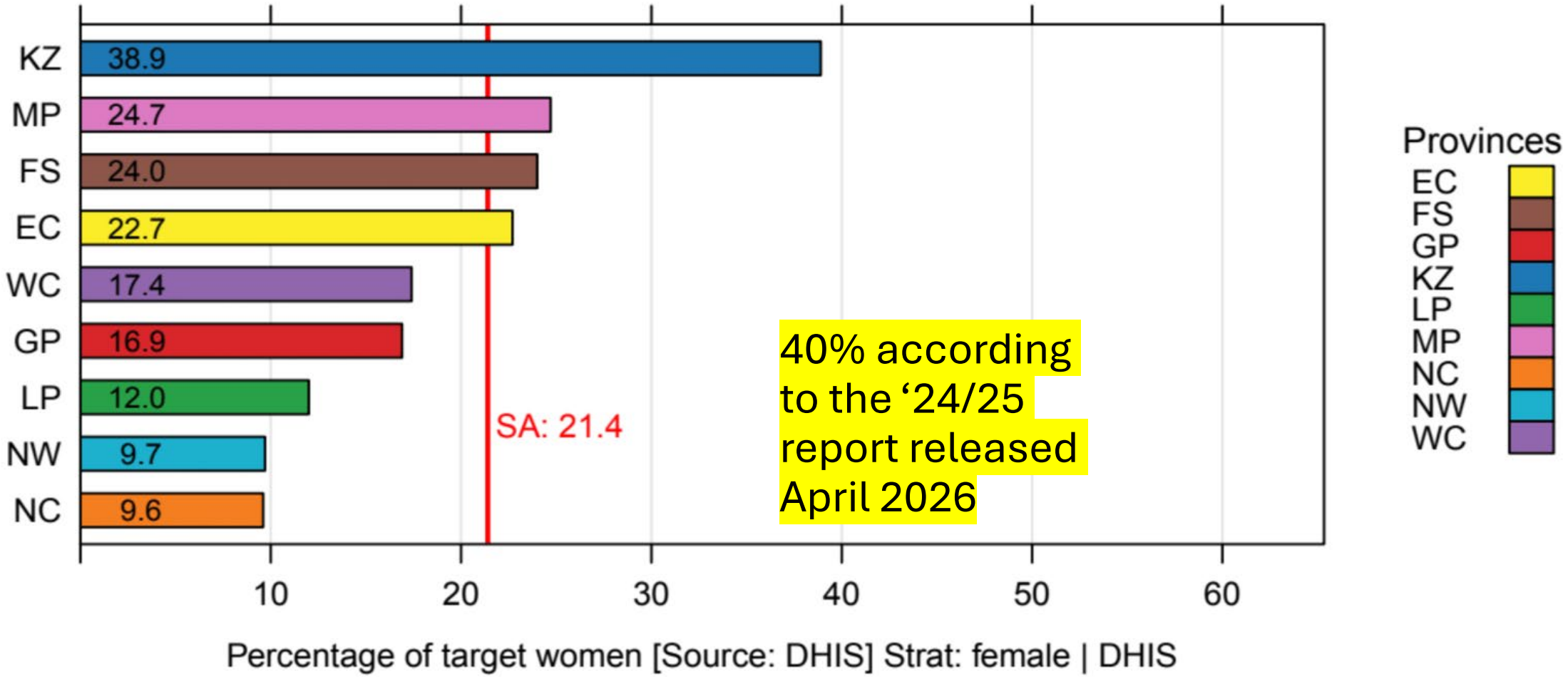
Cytology

- Sensitivity: ~60–75% (highly variable)
- Specificity: ~90–95%

- Regular screening can reduce cervical cancer incidence by up to 80%.
- Screening should be targeted at women aged 30-65 years.
- WHO recommends screening every 5 years for HPV among women aged 30-49 years

- NTCC trial – Italian. 2008, 2010
- POBASCAM – The Netherlands
- ARTISTIC - UK (NHS)
- Swedescreen

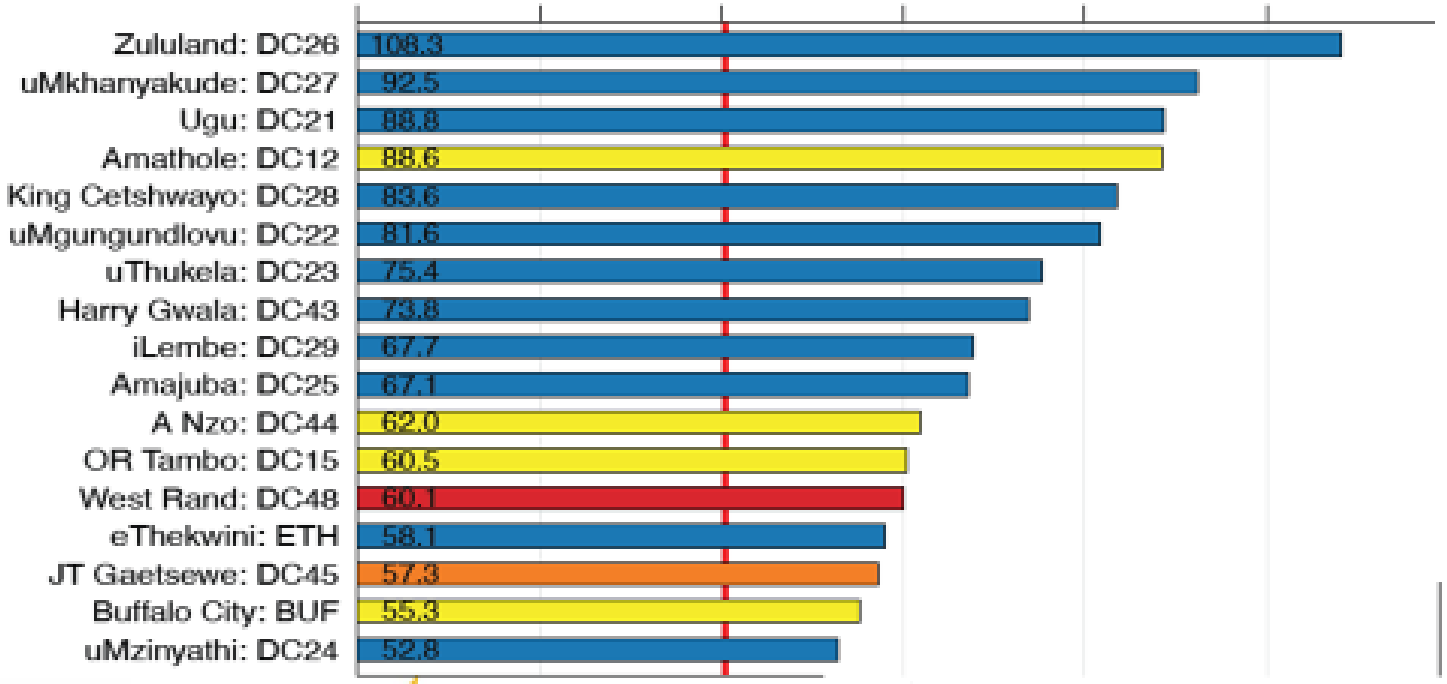
Cervical cancer screening coverage by province, 2022/23

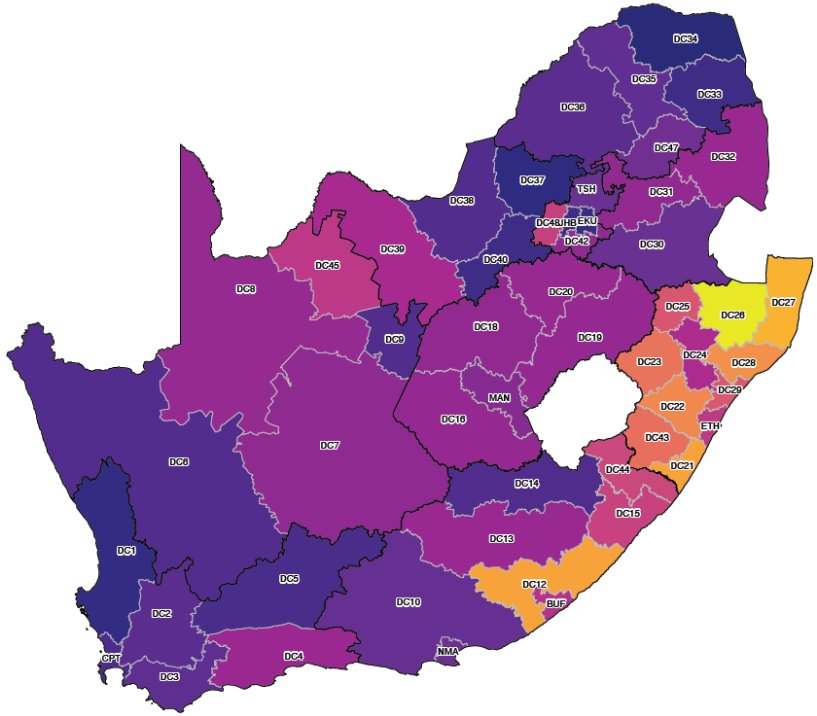


40% according to the '24/25 report released April 2026

Pillar 2A - Screening coverage by age group – province / district / facility

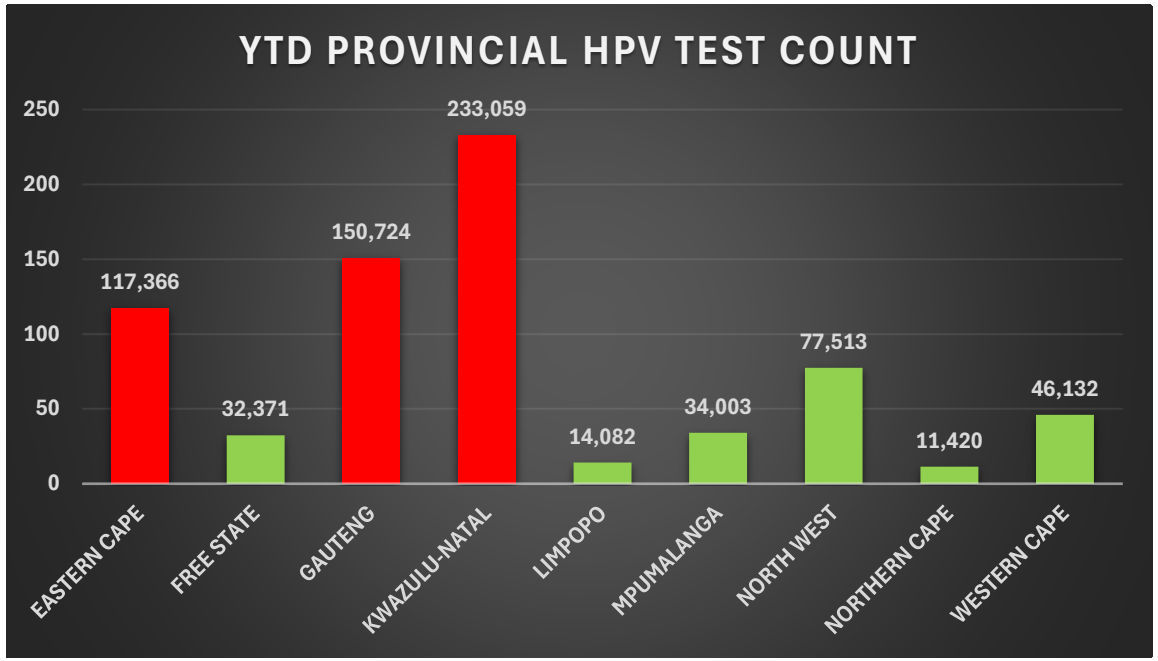
District Health Barometer – screening coverage

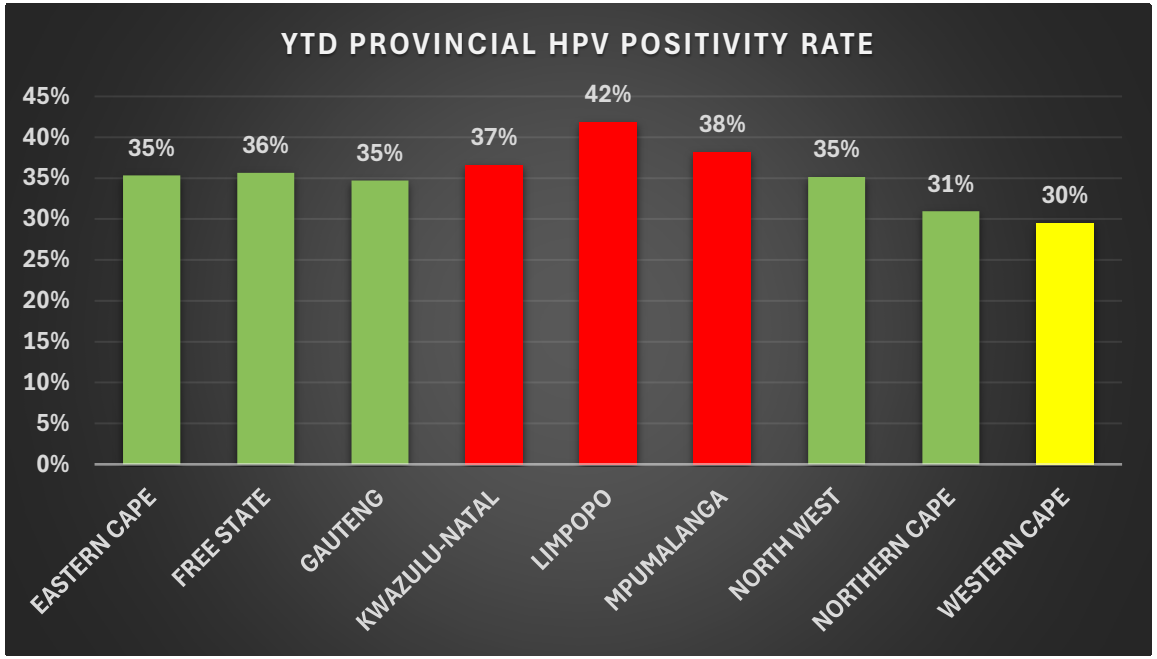




BRIEF PROVINCIAL OVERVIEW – HPV TESTING

Reporting Period May 2024 – Jan 2026

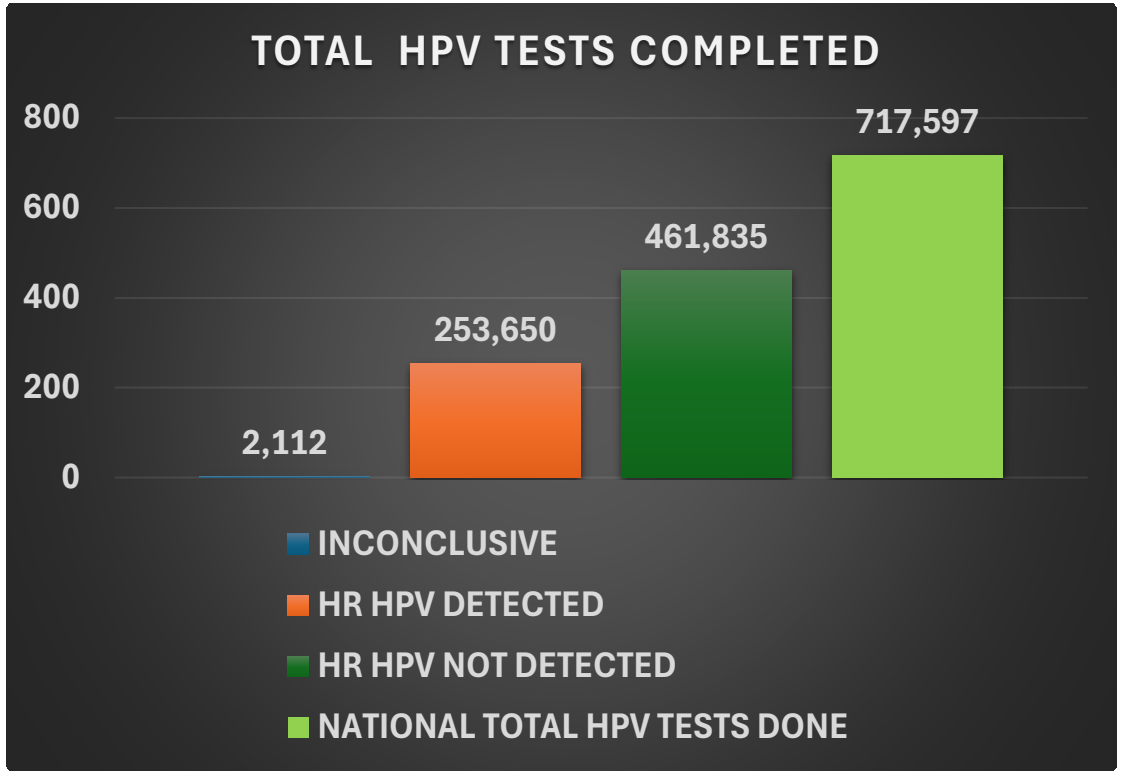


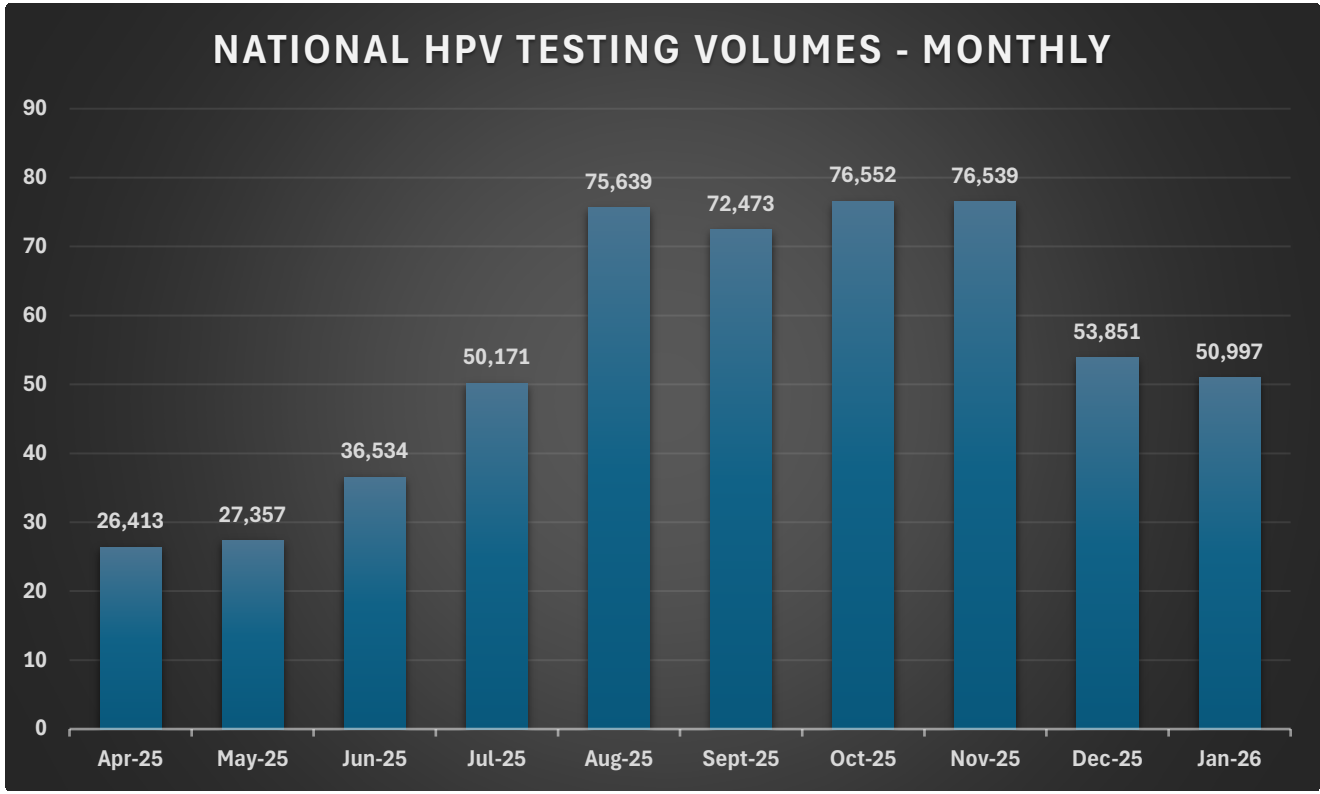


- KZN has done the most testing in the reporting period – a total of **233 059** tests.
- Gauteng province has the second highest testing volumes of **150 724** and Eastern Cape province has the third highest testing volumes at **117 366**.
- Limpopo has the highest positivity rate of **42%, main contributing factor is that in Limpopo's screening algorithm** – HPV testing is being done only on high risk women **only**.

BRIEF NATIONAL OVERVIEW – HPV TESTING

(Reporting period May 2024 – 30 January 2026)

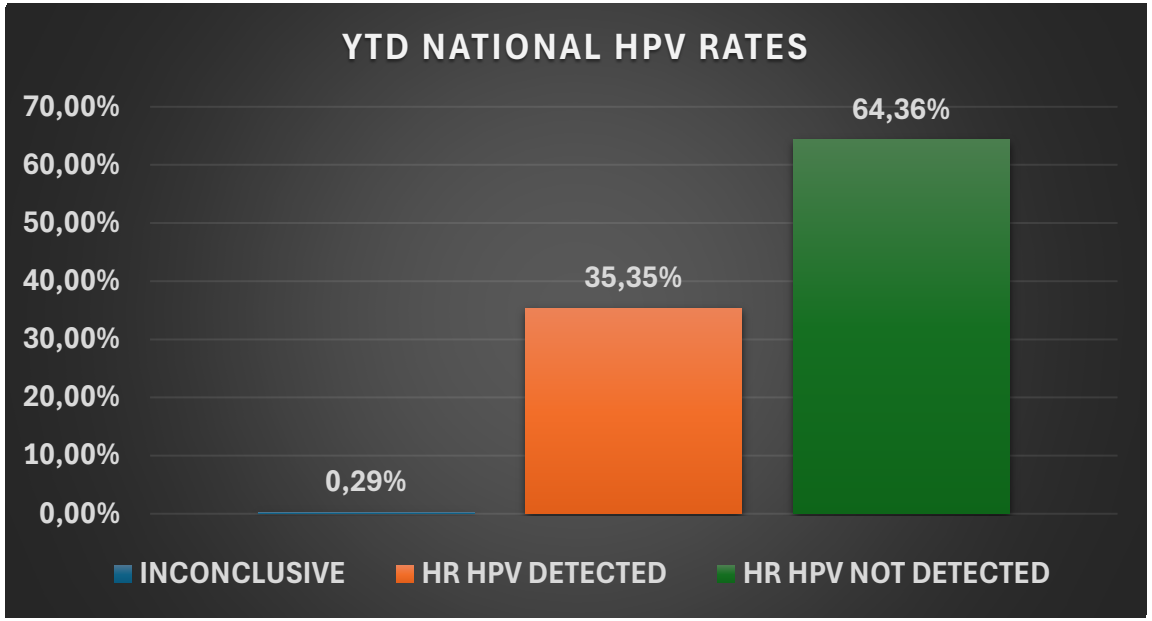


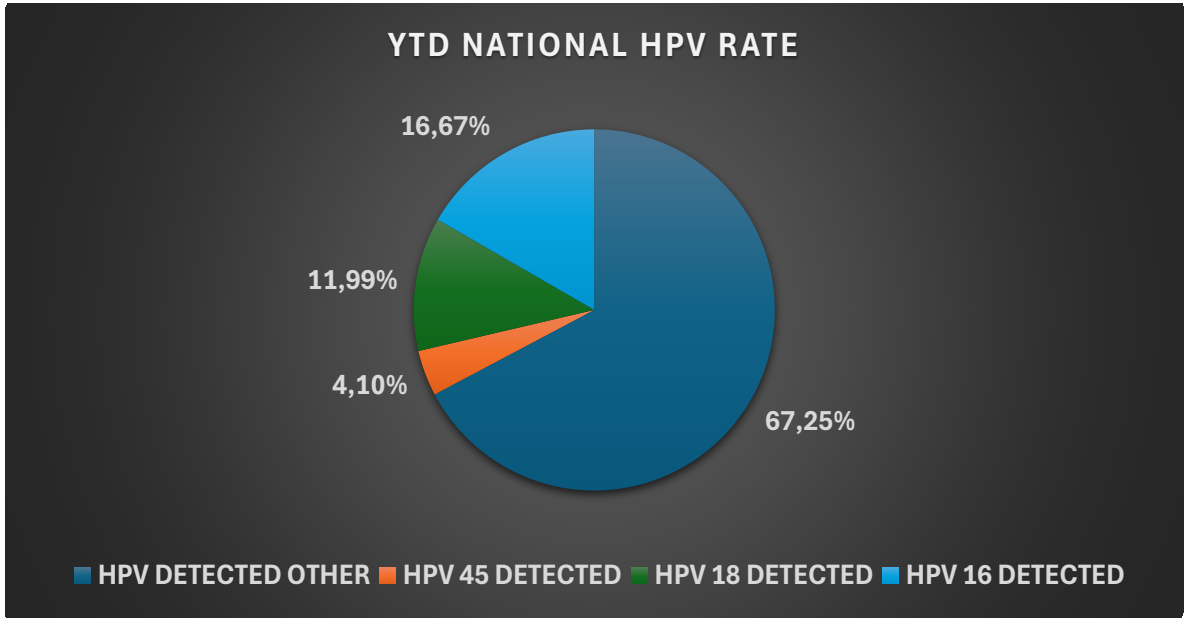


- The total HPV tests completed Nationally for the reporting period – **717 597**.

NATIONAL OVERVIEW – HPV TESTING CONT…

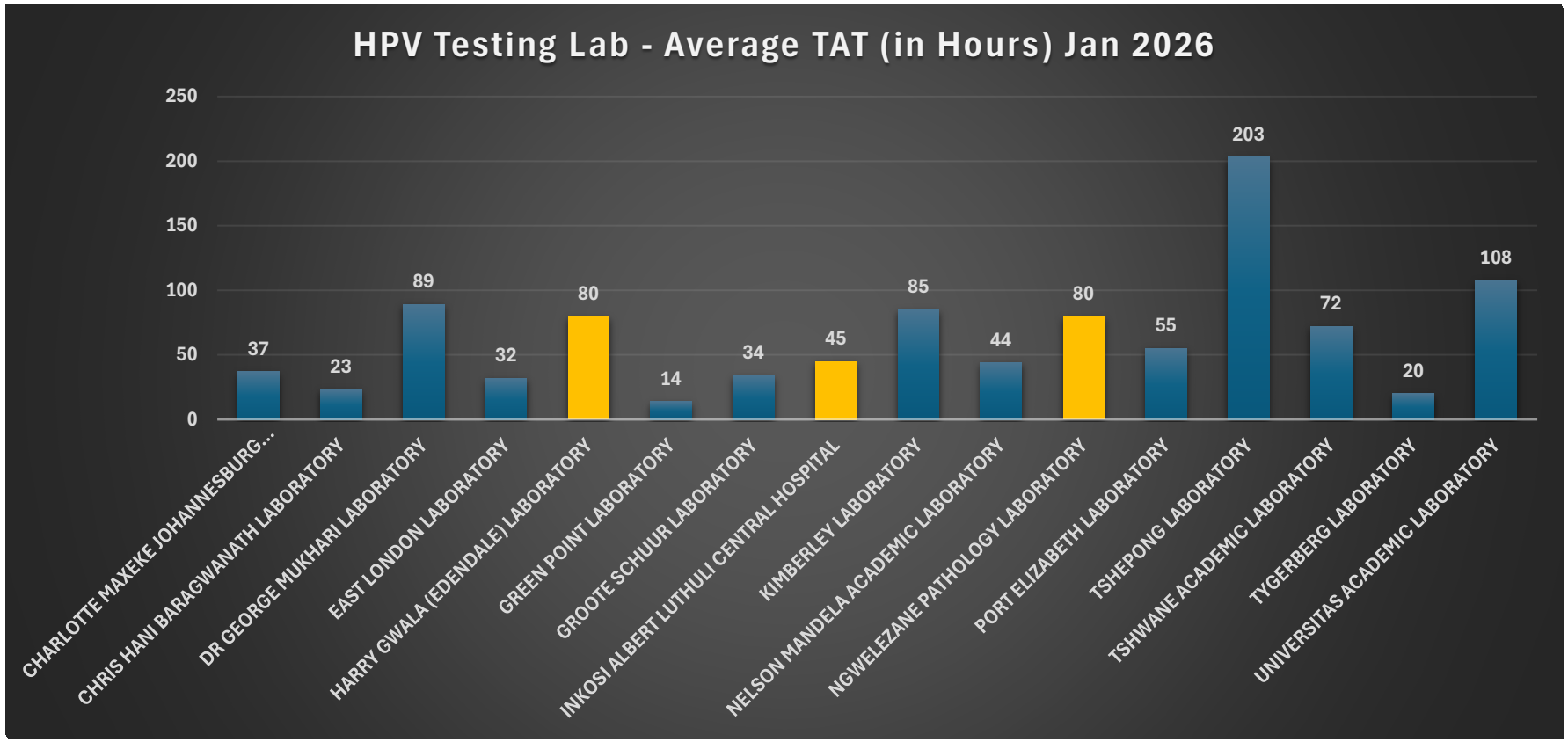
(reporting period May 2024 - 30 January 2026)





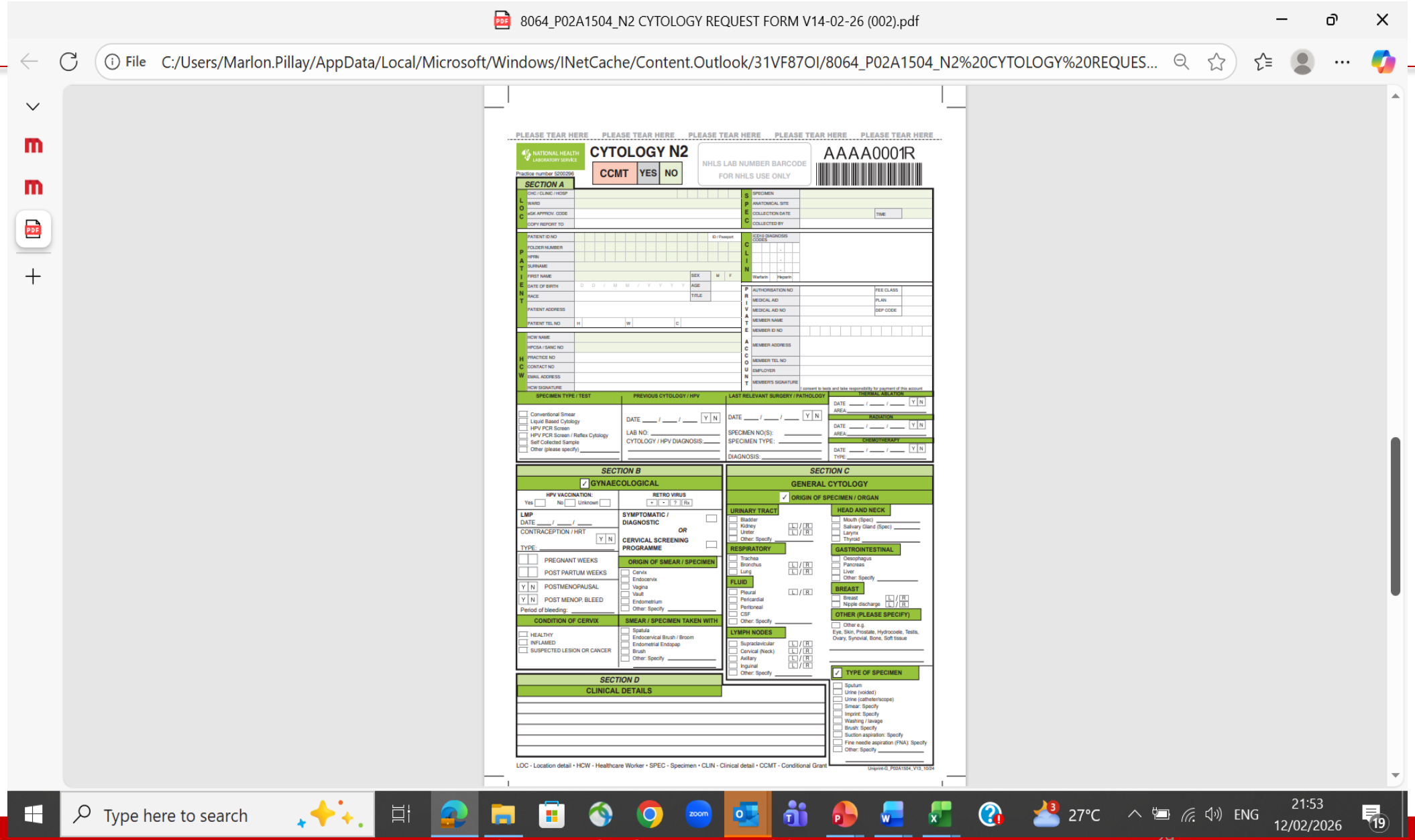
- The National Avg for High Risk HPV negativity rate is **64.3%** and positivity rate is **35.3%**.
- Out of the **35.3%** positivity rate, **Other High Risk HPV Genotypes** accounted for most of the HPV infection **- 67%**.
- Second highest was **HPV 16** which accounted for **16.6%** and **HPV 18** accounted for **11.9%.**
- **HPV 45 accounted for 4.1% -**

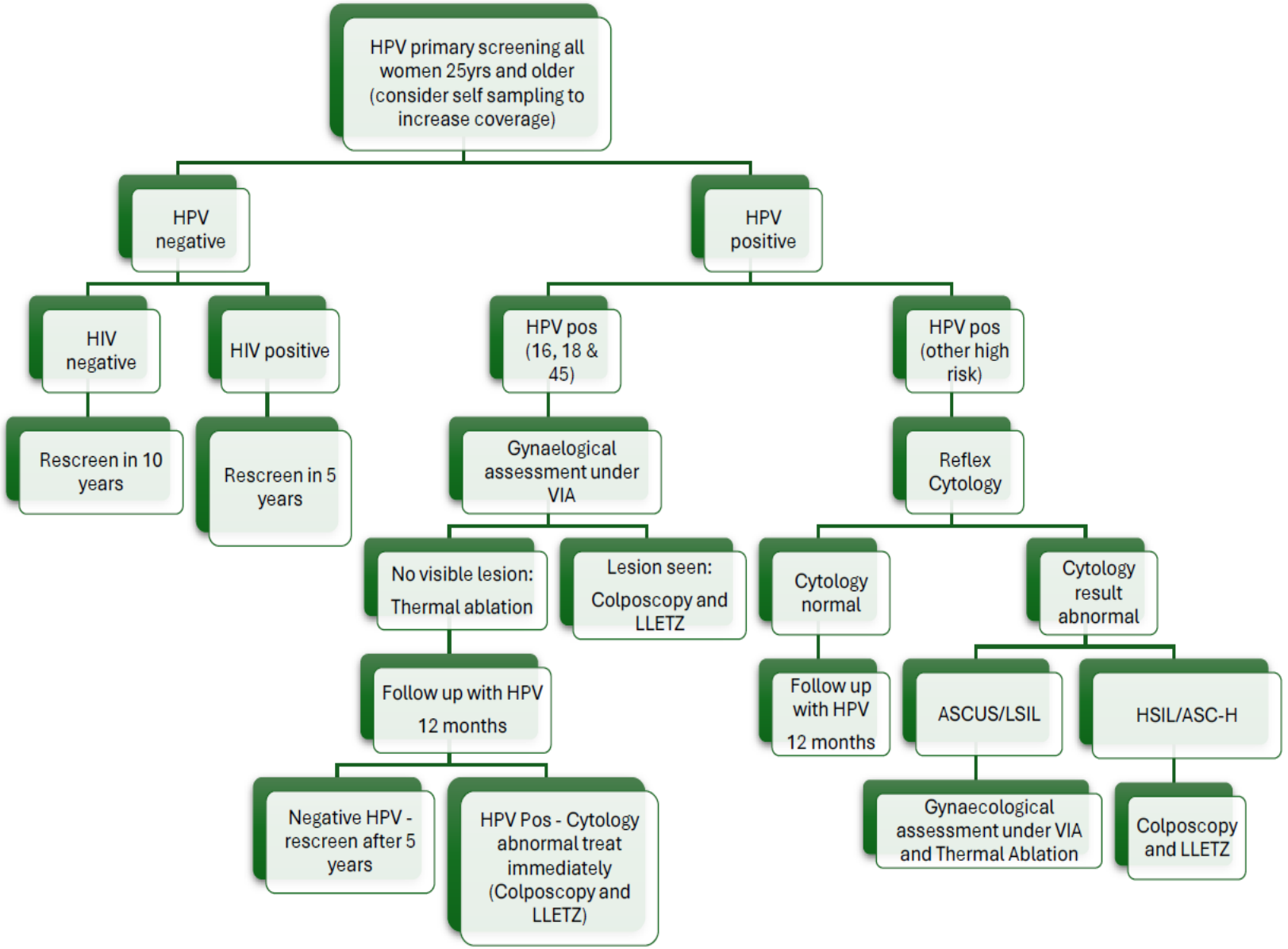
HPV TESTING IN LAB TURNAROUND TIMES (TAT in hours)



- KZN NHLS National In Lab TAT Avg is 3 - 4 days.
- SMS notification of HPV screening results – up to 64% patients will get an SMS within a week to return after 10years or 5 years.
- Other 36% patients that tested pos for HPV, will get an SMS after the cytology testing is completed.

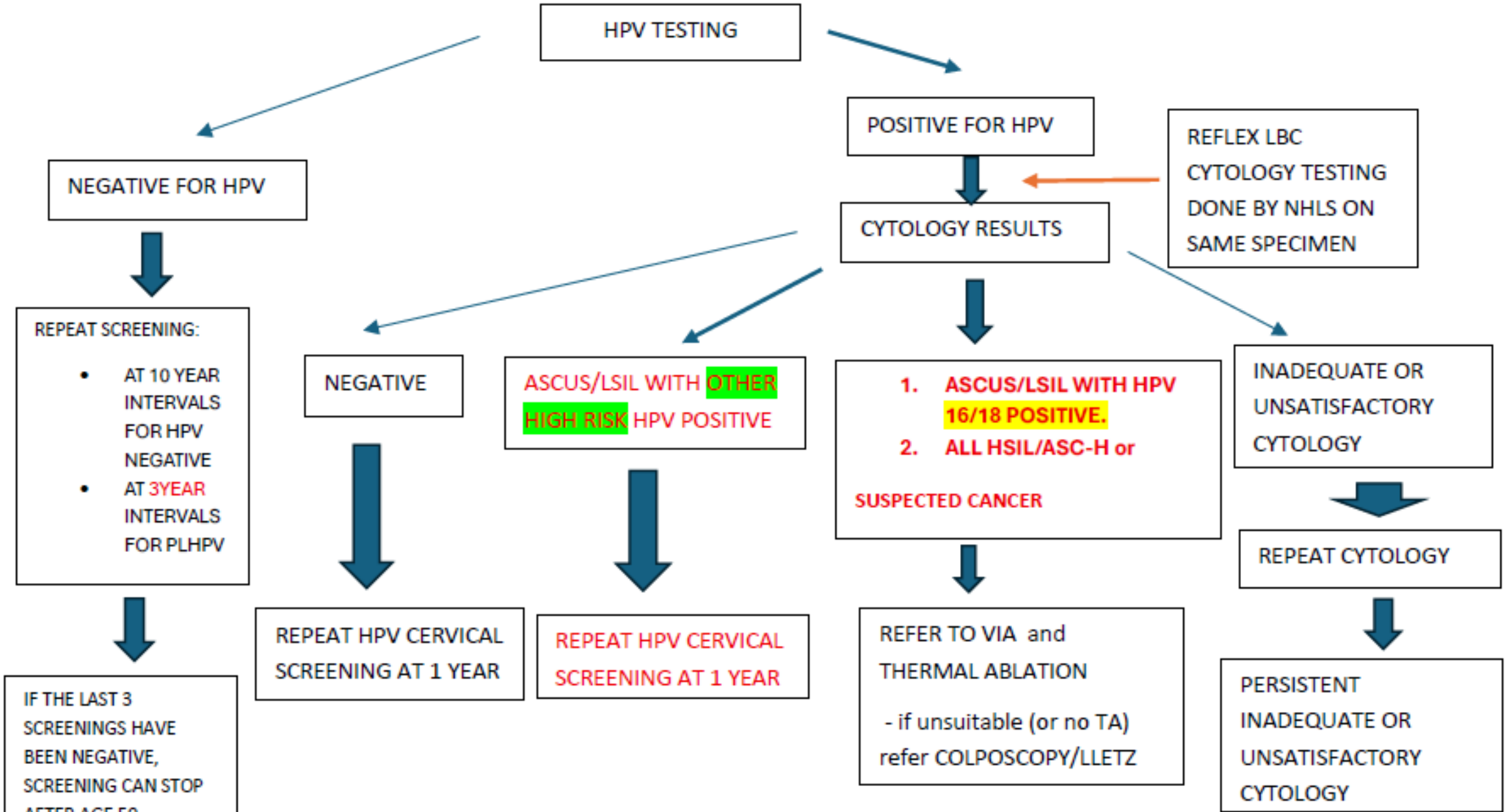
Please indicate HPV test on the form




HPV primary screening all women 25yrs and older (consider self sampling to increase coverage)
HPV negative
HPV positive
HIV negative
HIV positive
HPV pos (16, 18 & 45)
HPV pos (other high risk)
Rescreen in 10 years
Rescreen in 5 years
Gynaelogical assessment under VIA
Reflex Cytology
No visible lesion: Thermal ablation
Lesion seen: Colposcopy and LLETZ
Cytology normal
Cytology result abnormal
Follow up with HPV 12 months
Follow up with HPV 12 months
ASCUS/LSIL
HSIL/ASC-H
Negative HPV - rescreen after 5 years
HPV Pos - Cytology abnormal treat immediately (Colposcopy and LLETZ)
Gynaecological assessment under VIA and Thermal Ablation
Colposcopy and LLETZ

IDENTIFY CANDIDATES FOR ROUTINE SCREENING

FIRST SCREENING AT AGE 30 (OR FIRST OPPORTUNITY OVER 30 YEARS) OR AT 25 FOR PLHIV



KZN data

Results: May 2024- June 2026 (26 months)

- Total cervical screenings done: 580580 (av. 22330 per month)
- 316823 done by primary HPV testing (55%)
- 263757 done by primary cytology testing (45%)

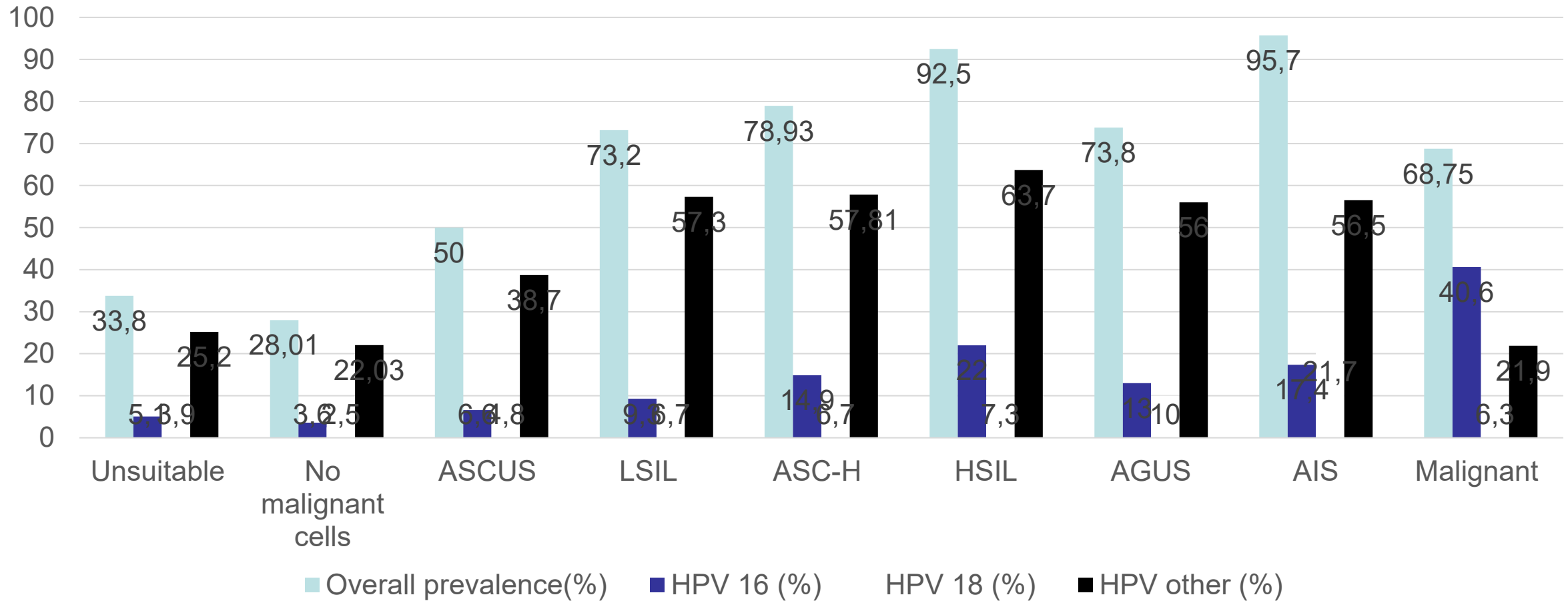
- HPV testing up to 72% of cervical screening in 4th quarter of 2025/26

- Of those who had HPV testing (316862):
- HR HPV +ve: 114967 (36.3%)
- HR HPV –ve: 201395 (63.6%)
- Inconclusive: 500 (0.16%)

HR-HPV subtypes by diagnostic category – 40%

	Total (%)	OVERALL PREVALENCE (%)	HPV 16 PREVALENCE (%)	HPV 18 PREVALENCE (%)	HPV OTHER PREVALENCE (%)
Unsuitable	1854(2,0)	627(33,8)	136(7,3)	97(5,2)	564(30,4)
No malignant cells	66 159(70,2)	18 531(28,01)	3263(4,9)	2250(3,4)	15805(23,9)
ASCUS	6 457(6,9)	3 229(50,0)	607(9,4)	467(7,2)	2596(40,2)
LSIL	12 318(13,1)	9017(73,2)	1880(15,3)	1362(11,1)	8058(65,4)
ASC-H	1 969(2,1)	1554(78,9)	406(20,6)	212(10,8)	1272(64,6)
HSIL	5 140(5.5)	4755(92,5)	1577(30,7)	602(11,7)	3795(73,8)
AGUS/AIS	130(0,14)	101(77,7)	39(30,0)	36(27,7)	75(57,7)
Malignant	32(0,03)	22(68,9)	14(43,8)	3(9,4)	10(31,3)

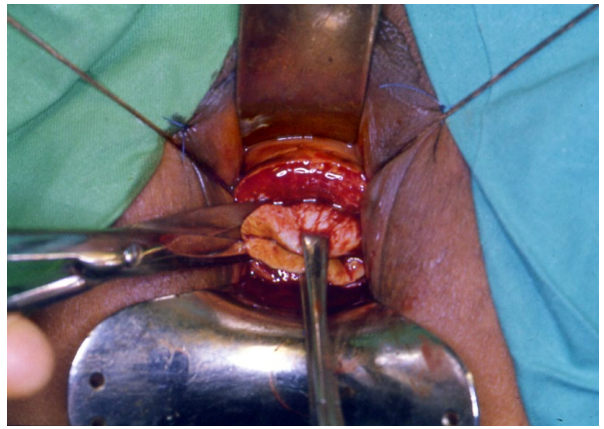
1 in 3 women with NILM have Hr-HPV (23-33%)

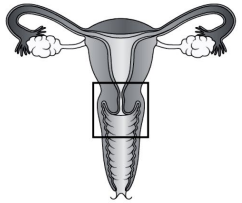

100
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14,9
6,7
57,81
92,5
22
7,3
63,7
73,8
13
10
56
95,7
17,4
21,7
56,5
68,75
40,6
6,3
21,9
Unsuitable
No malignant cells
ASCUS
LSIL
ASC-H
HSIL
AGUS
AIS
Malignant
Overall prevalence(%)
HPV 16 (%)
HPV 18 (%)
HPV other (%)

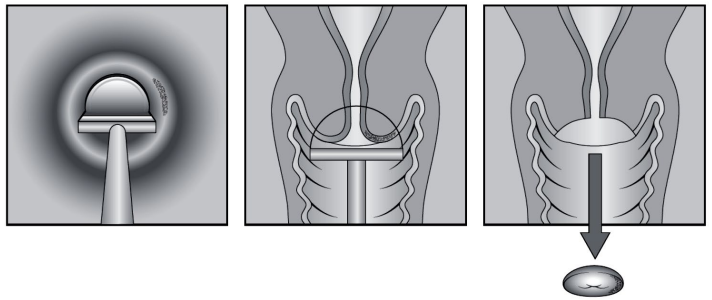
Treatment of lesions

Cervical pre-cancer treatment

Excise



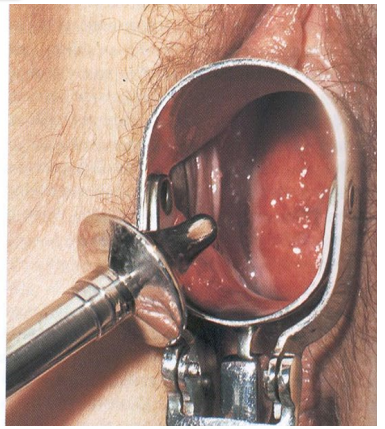




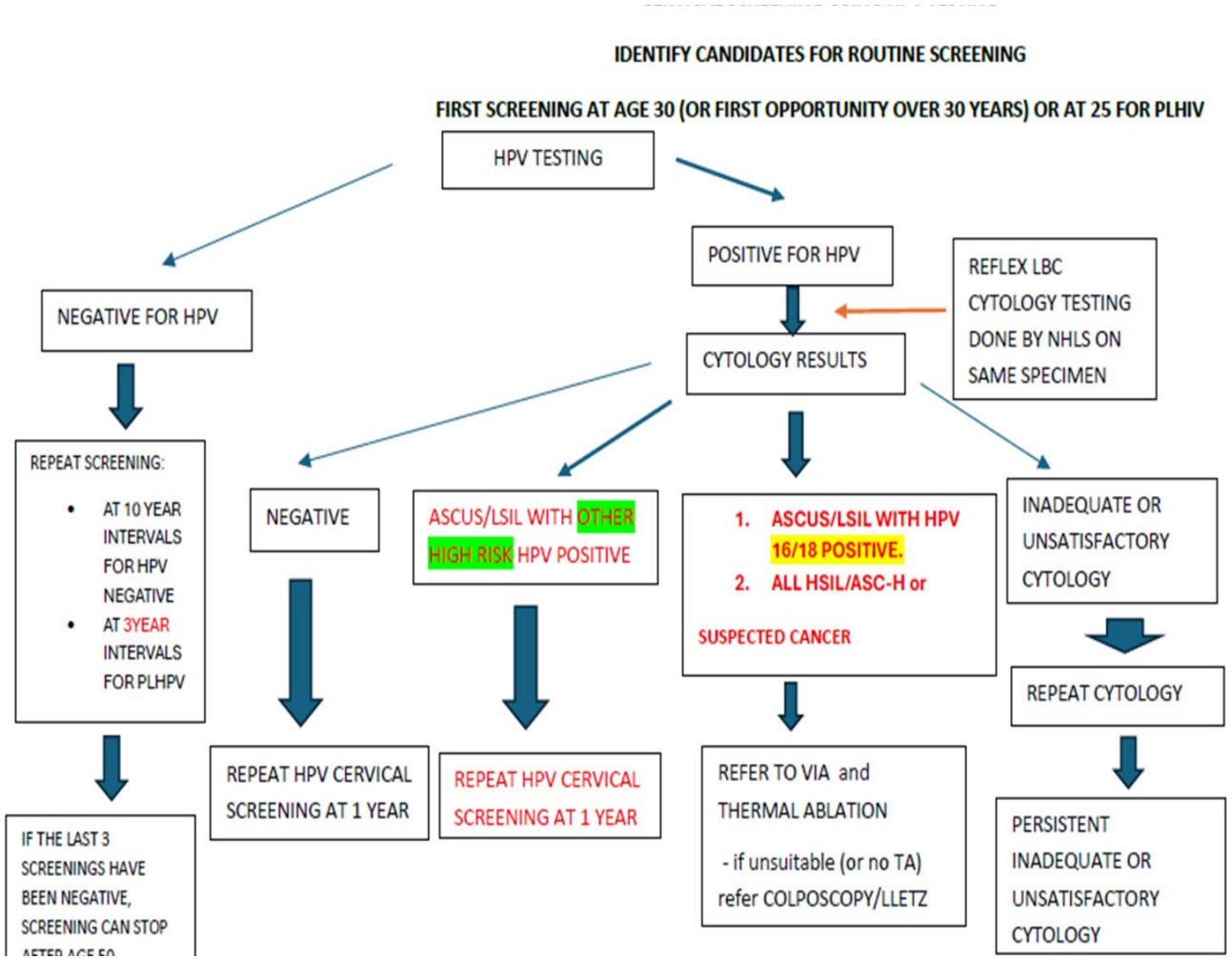
Ablate







Planned thermal ablation training

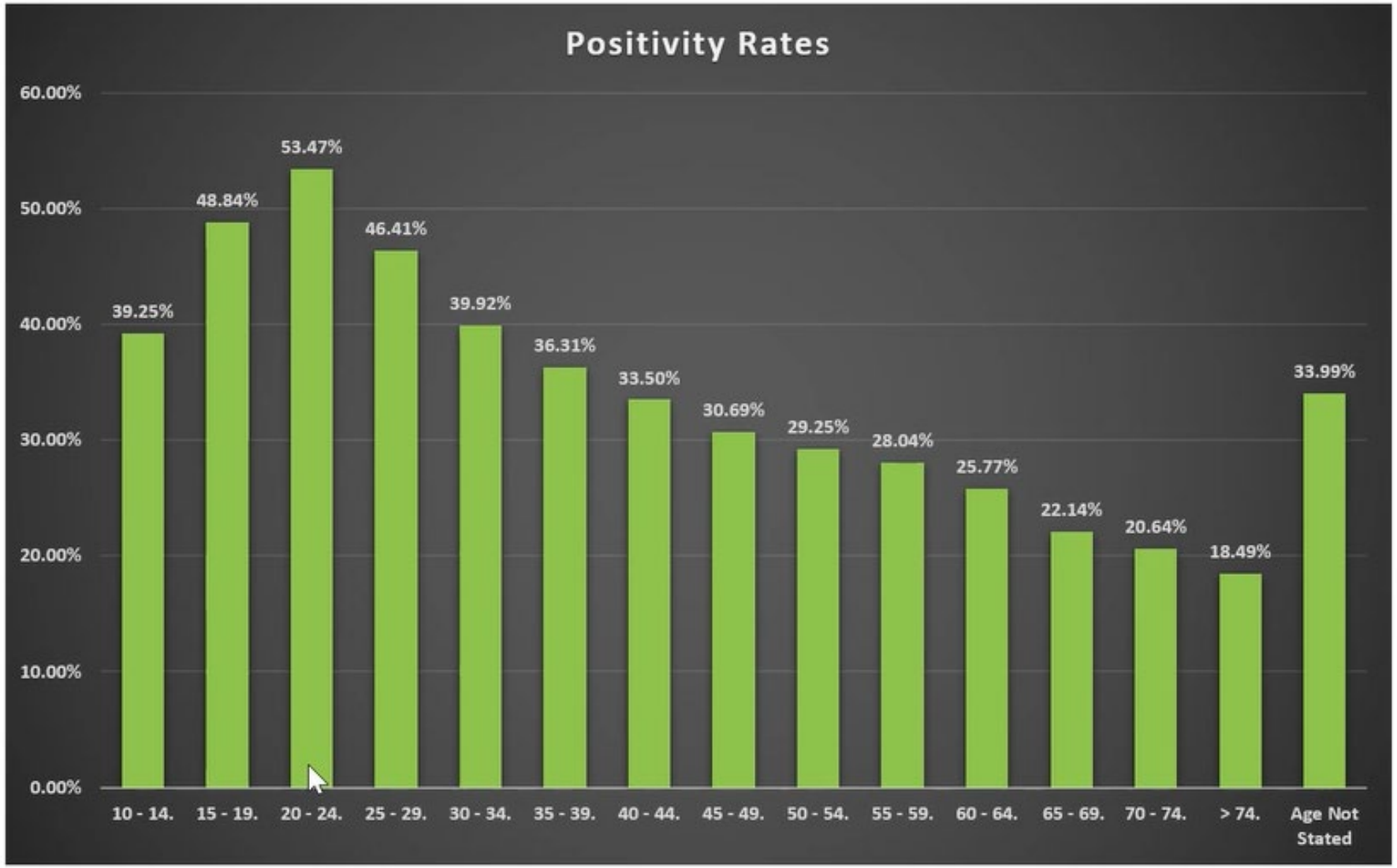


- Nov 28 @IALCH
- **Prioritize all HSIL – 12.3%**

(45 women of 400)

- **16/18 with ASCUS/LSIL – 23%**

HPV positivity per age category: May 2024- June 2026



The Current State		The KZN 2030 Framework
• **3 Pillars** (WHO baseline)	**Structure**	• **5 Pillars** (KZN comprehensive approach)
• Screening at 30+ years	**Target Age**	**Screening lowered to 25+ years**
• Traditional Health Practitioners excluded	**Community Partners**	THPs formally integrated via Ubuntu framework
• End-of-life add-on	**Palliation**	Integrated from the moment of diagnosis
• Siloed, retrospective volume tracking	**Data Utilization**	Data-for-action line lists & unique IDs

The overarching shift is moving from isolated events to an accountable pathway.

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Pillar 1: HPV Vaccination & Primary Prevention

The Clinical Shift (Facility/System)

- Move beyond school-only models.
- Routine availability via PHC and EPI platforms.
- Target out-of-school girls and private schools.
- Strategic use of conditional grants for permanent tech/vehicles.

The Community Role (Demand Generation)

- Simplify and localize the parental consent process.
- Deploy traditional/religious leaders, civil society, and fathers' forums to dismantle vaccine hesitancy.

The Accountability Metric (Data)

- Transition to electronic vaccination records linked to unique patient identifiers.

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Pillar 2A: Screening & Early Detection

The Clinical Shift (Facility/System)

- Accelerate transition to HPV-DNA testing.
- Scale up HPV self-sampling pathways for hard-to-reach groups.
- Integrate screening into HIV, TB, and family planning streams.

The Community Role (Demand Generation)

- Map and engage underserved groups (rural, farm workers, sex workers) alongside NGOs.
- Conduct integrated community dialogues (CC, breast cancer, HIV).

The Accountability Metric (Data)

- Mandate a 21-day NHLS laboratory turnaround target.
- Implement results-for-action line lists and direct patient SMS/WhatsApp notifications.

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Pillar 2B: Treatment of Precancerous Lesions

The Clinical Shift (Facility/System)

- Decentralize access by deploying 23 donated thermal-ablation machines to specific PHCs and CHCs.
- Train medical officers with direct mentorship support.

The Community Role (Navigation)

- Formalize Women's Health Champions at the PHC level.
- Train lay counselors, CBOs, and THPs to actively prevent loss-to-follow-up between diagnosis and treatment.

The Accountability Metric (Data)

- Institute a strict 1-month target for LLETZ or thermal-ablation access.
- Mandate routine monthly intradistrict backlog reviews.

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Pillar 3A: Treatment of Invasive Cervical Cancer

The Clinical Shift (Coordination)

- Establish District Cancer Care Coordination Teams (DCCCTs).
- Expand medical-oncology outreach from tertiary to regional hospitals.
- Explore public-private overflow partnerships (e.g., tele-oncology, radiotherapy).

The Community Role (Navigation)

- Assign district social workers/auxiliary workers to coordinate support.
- Map local CBOs and FBOs specifically for family and treatment support.

The Accountability Metric (Data)

- Track explicit timeframes from diagnosis to treatment completion.
- Standardize provincial referral and down-referral pathways.

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Pillar 3B: Palliative Care & Survivorship

The Clinical Shift (Integration)

- Integrate palliation from the point of diagnosis, not just end-of-life.
- Implement a 5-day palliative training model for PHC clinicians.
- Establish dedicated cancer-navigation desks at PHC/district levels.

The Community Role (Support)

- Recruit cervical cancer survivors for peer-to-peer support.
- Map and train district hospice organizations and THP groups for psychosocial support.

The Accountability Metric (Data)

- Embed standardized palliative and survivorship indicators directly into District Health Plans.

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100% Preventable.

100% Treatable if caught early.

6,000+

South African women die annually.

38%

Current screening coverage in KZN (missing the 2030 target of 70%).

We are severely off track. The current piecemeal approach is failing the women of KwaZulu-Natal.

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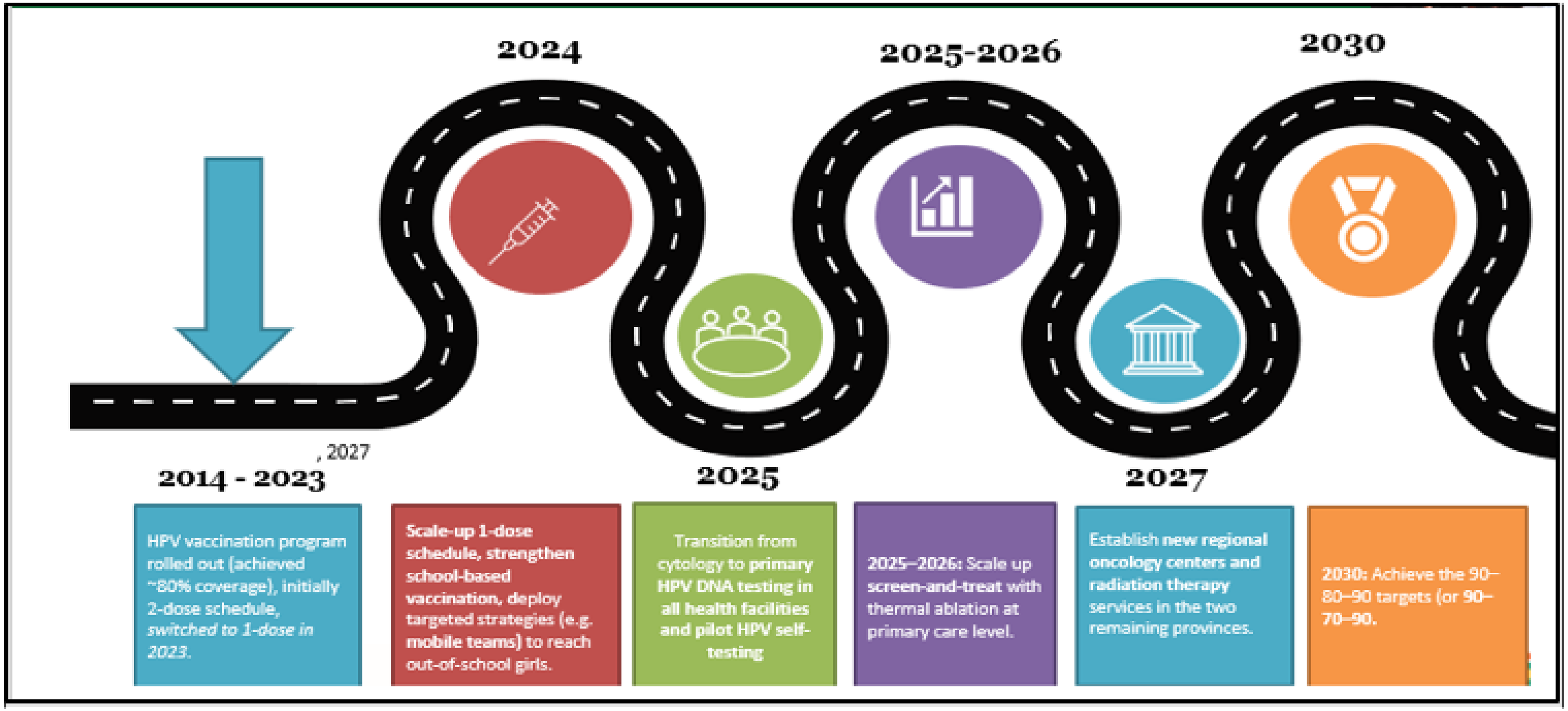


Figure 4: Roadmap of South Africa's cervical cancer elimination journey, highlighting achievements since 2014 and future priorities.

Thank you