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May 2nd, 12:00 AM

What is the Efficacy of the Newly Developed HPV Vaccine, Cocolin, in Providing Protection Against HPV-Induced Cervical Cancers in Females Aged 9-14 Years Old

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Williams, Yolanda, "What is the Efficacy of the Newly Developed HPV Vaccine, Cocolin, in Providing Protection Against HPV-Induced Cervical Cancers in Females Aged 9-14 Years Old" (2024). *Rowan-Virtua Research Day*. 112.

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ROWAN-VIRTUA
Osteopathic Medicine

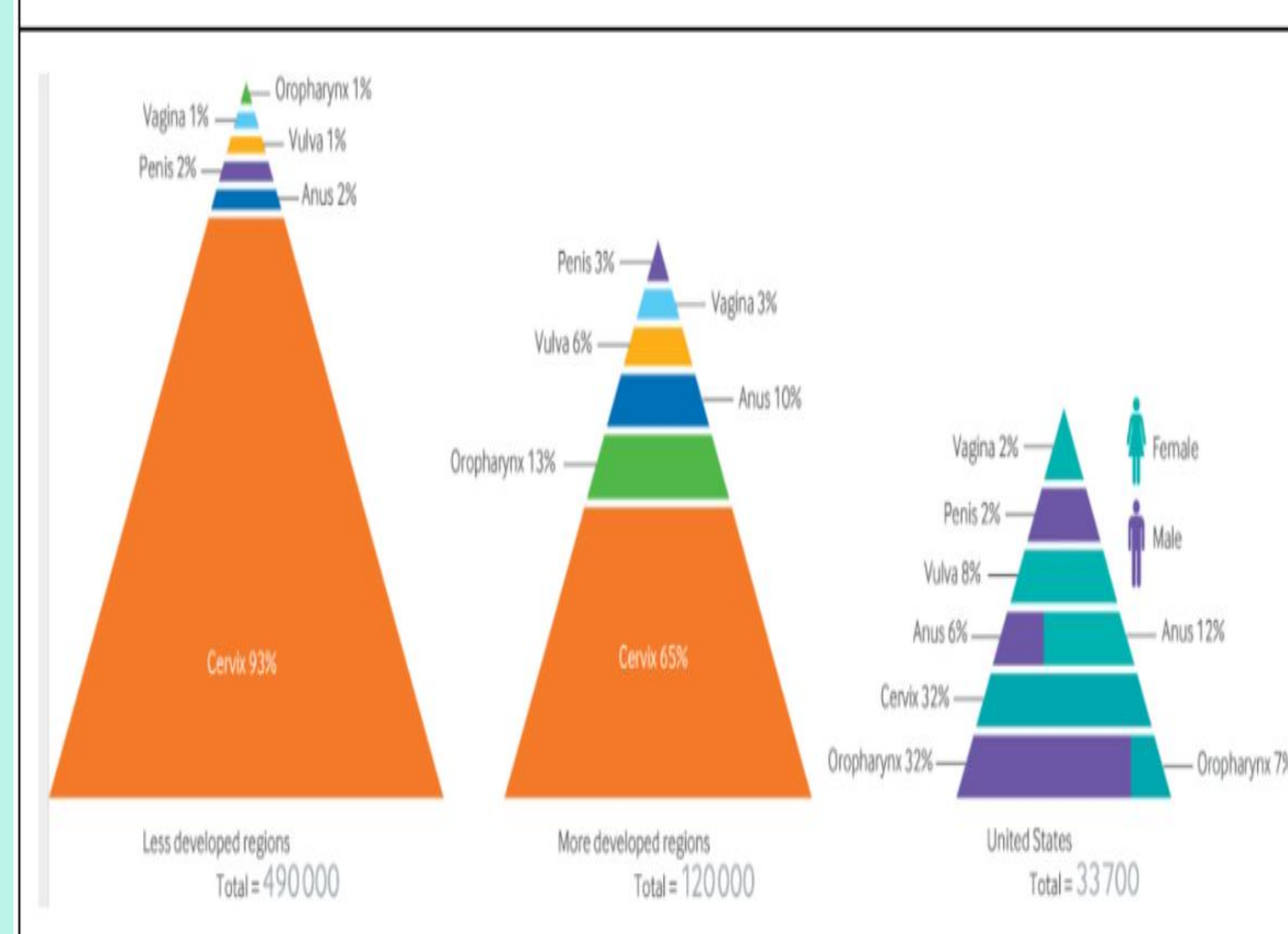
What is the Efficacy of the Newly Developed HPV Vaccine, Cecolin, in Providing Protection Against HPV-Induced Cervical Cancers in Females Aged 9-14 Years Old

By: Yolanda Williams OMS II

BACKGROUND

- In low to middle-income countries like Asia, there's an alarming rise in invasive cervical squamous cell carcinoma (ICC)¹² Fig 1,2
- Affordability emerges as a crucial factor influencing this trend
- Notably, Cecolin, a new Chinese bivalent HPV vaccine by Inovax, has received WHO pre-approval and is priced at \$47.70 per dose⁷
- Phase 3 clinical trials have demonstrated Cecolin's efficacy against cervical strains of HPV, offering a promising and more affordable option for countries grappling with rising ICC rates.

Figure 1: Numbers of Human Papillomavirus Associated Cancers



METHODS

Study design: Systematic literature review

Database	PubMed (528)
Search Items	Cecolin, HPVcervical cancer, Cervical cancer in low income countries.
Inclusion Criteria	2018-2023 articles, cervical cancers, HPV vaccine for females aged 9-45, Inovax manufacture, phase 3 clinical trials of Cecolin
Exclusion Criteria	Not in English, HPV cancers not related to cervical cancers, duplicates
Final article count	16

Cecolin is highly efficacious against HPV cervical cancer strains 16 and 18

RESULTS

Figure 2: Geometric Mean Concentration Ratios at 6 Months after Dose 1

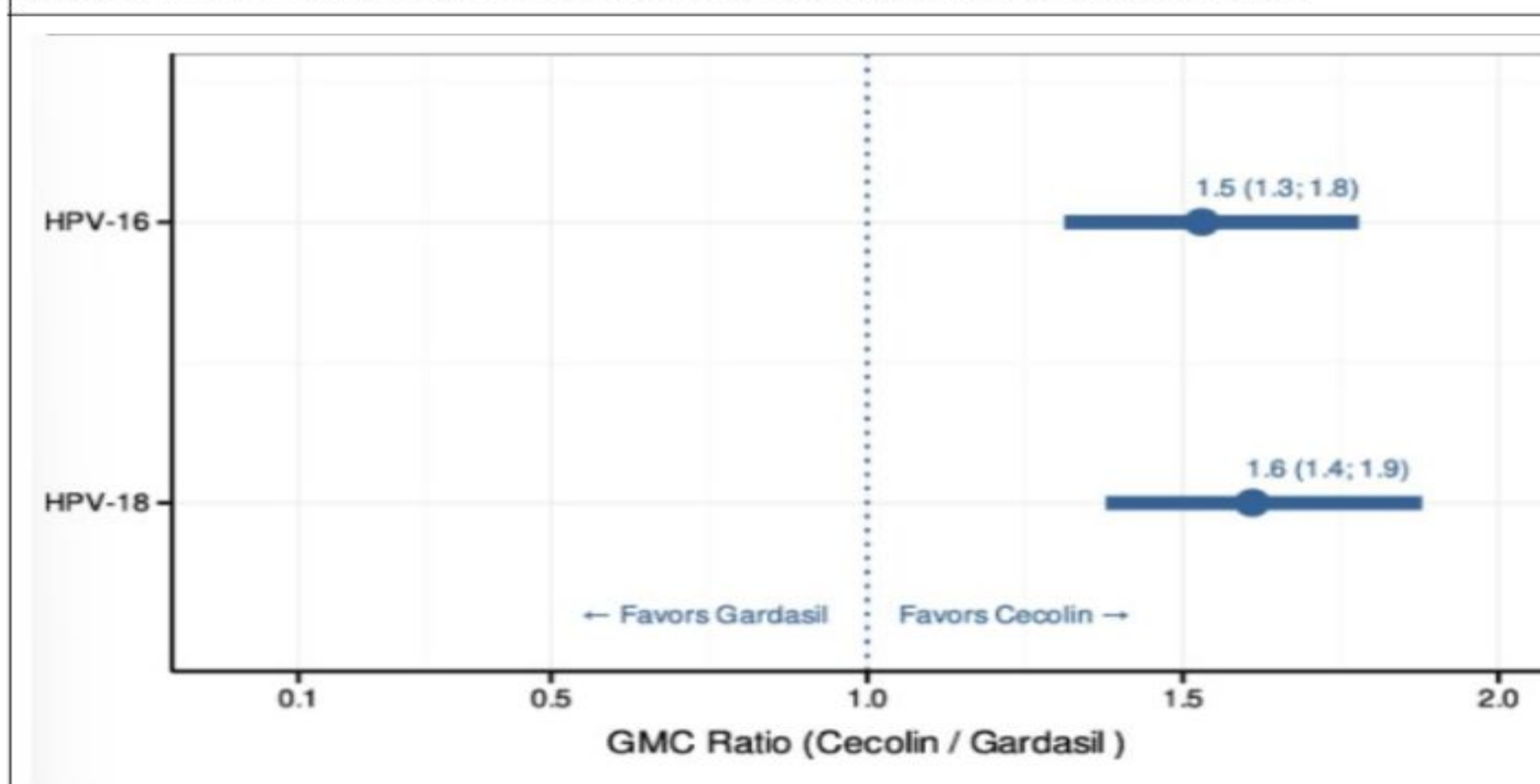


Figure 3: Non-Inferiority Evaluation of Cecolin 0-6 Months 1 month Post-Dose 2

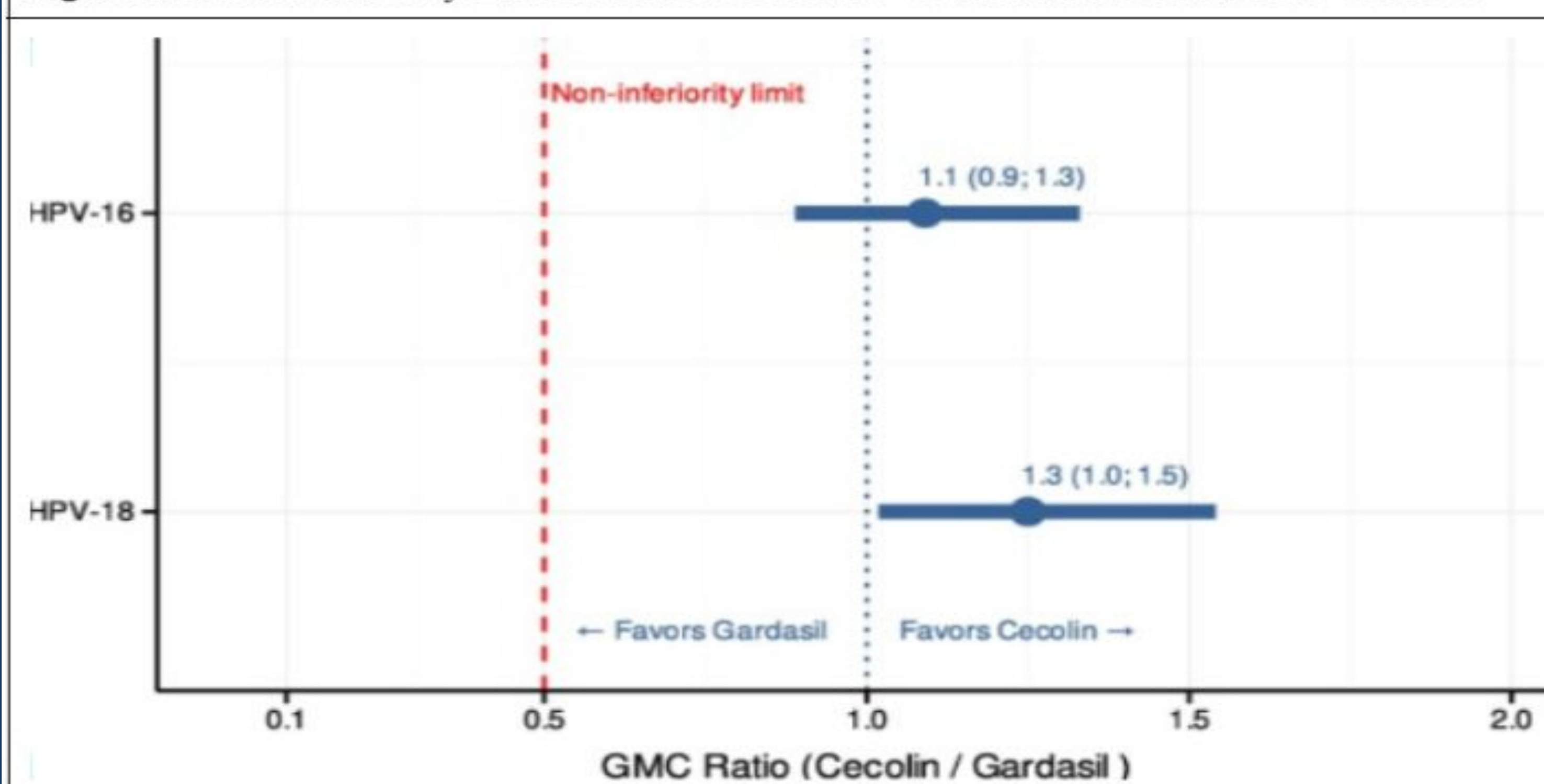
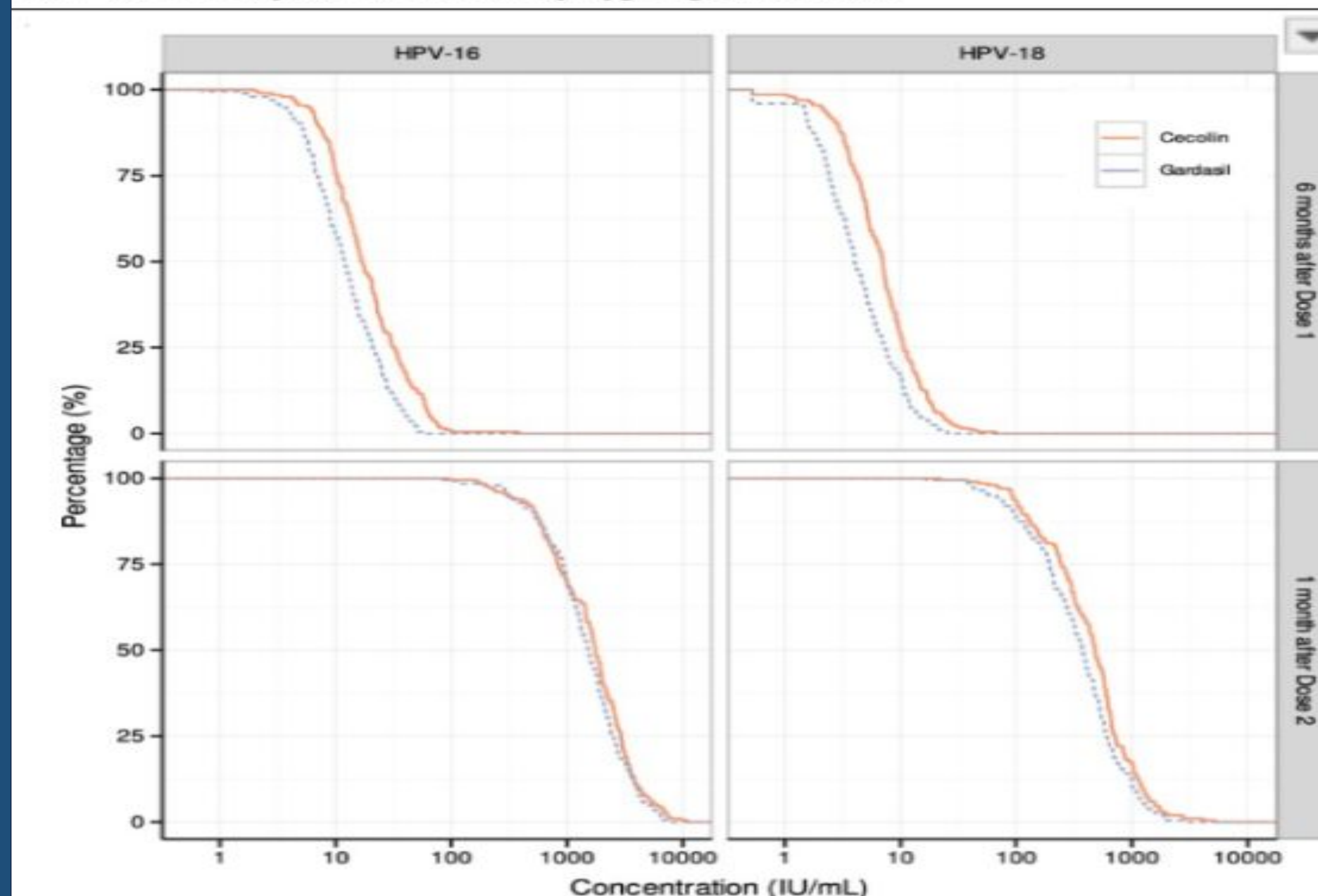


Figure 4: Reverse Cumulative Distribution of Immunoglobulin G HPV-16 and HPV-18 Antibody Concentrations by Type-Specific ELISA



DISCUSSION

- Cecolin showed a strong antibody response comparable to Gardasil, not only after one dose but also as a 2-dose regimen¹⁶ (Fig. 2 and 4)
- Cecolin showed non-inferiority when compared to Gardasil. This indicates that Cecolin is not significantly worse than the existing standard treatment¹⁶ (Fig 3)
- The potential incorporation of Cecolin as the new HPV vaccine of the WHO vaccination program can expand vaccine options. This can lead to improvements in affordability and accessibility that can now offer options that are cost effective to consumers.

FUTURE DIRECTIONS

Education and awareness: Healthcare professionals and the public would need to be educated about the new vaccine, its advantages

Public acceptance: overcome public mistrust of healthcare systems, cultural taboos of sexual health, parent consent

HPV vaccinations are not a gateway to temptation of sexual activity but rather a prevention to cancer.

