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Cervical Cancer: The Good News from a Gynecology Oncologist

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Alabama ranks **7th** in cervical cancer incidence in the United States and **3rd** in mortality

Incidence data – 2017-2021; mortality data – 2018-2022

<https://gis.cdc.gov/cancer/USCS/#/AtAGlance/>





Closing Gaps in Cancer Screening:

Connecting People, Communities, and Systems to Improve Equity and Access

Did you know...

**MORE
THAN
HALF**

of those diagnosed with cervical cancer have never been screened or are infrequently screened for cervical cancer.

Let's increase access to close the gap.

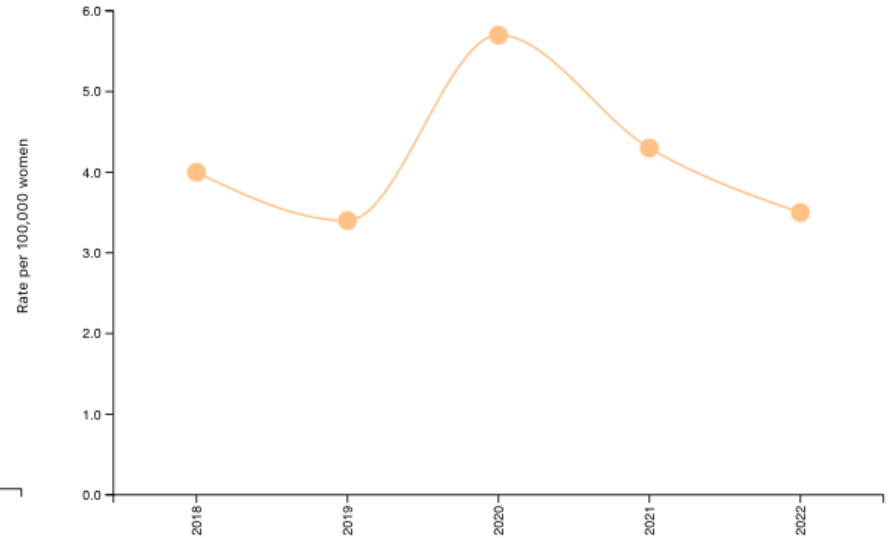
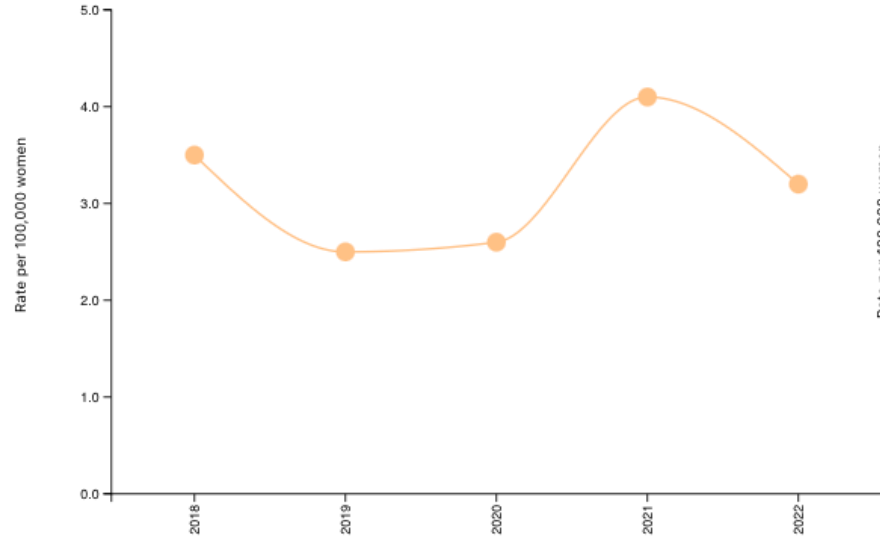


It started here... Village of Kimi, Island of Evia, Greece

George Nicholas Papanicolaou (1883-1962)



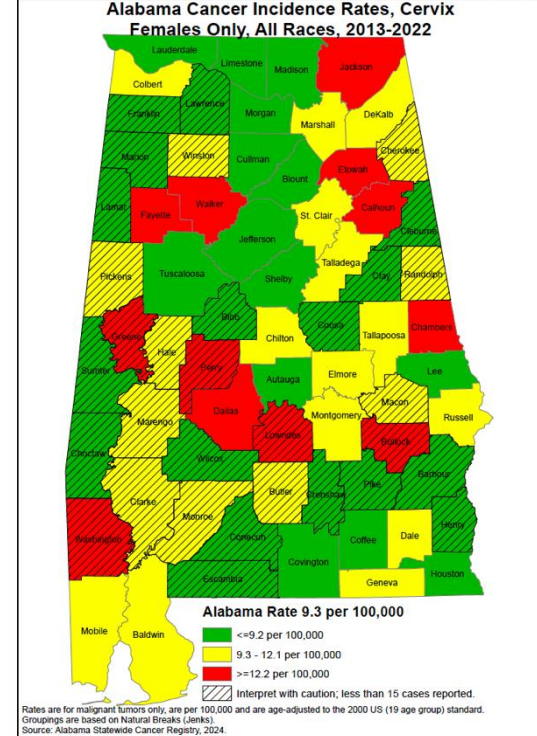
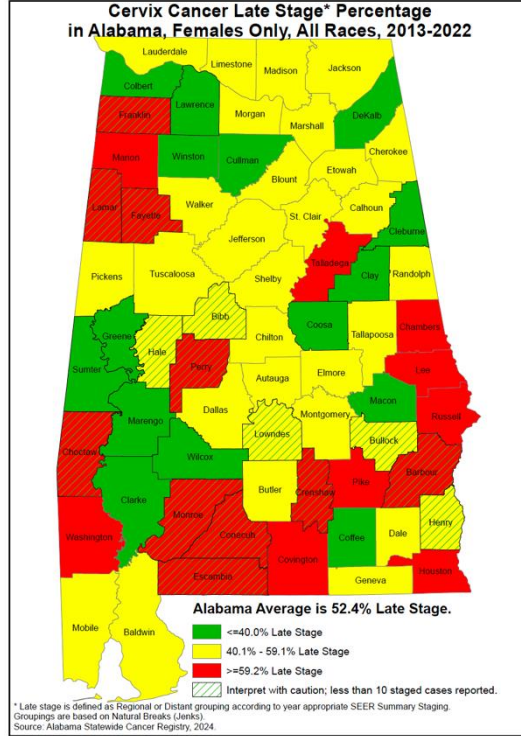
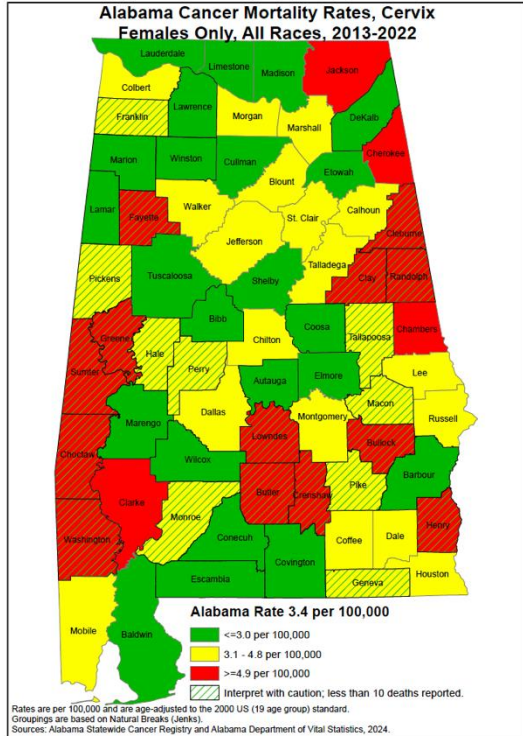
May 13, 2008: Celebration of 125
years of the birth of Papanicolaou, the
developer of the oldest medical test



Whites
3.5/100,000 in 2018
3.2/100,000 in 2022

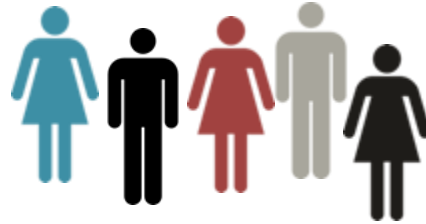
Blacks
4.0/100,000 in 2018
3.5/100,000 in 2022

Cervical Cancer Burden in Alabama



90%

of cervical cancers are associated with **HPV** (human papilloma virus) - a sexually transmitted infection



HPV is extremely common, nearly all sexually active individuals will get the virus at some point in their lives

90%

of HPV infection will clear up on its own. The infection will persist only in a small number of individuals, putting them at risk for HPV-related cancers



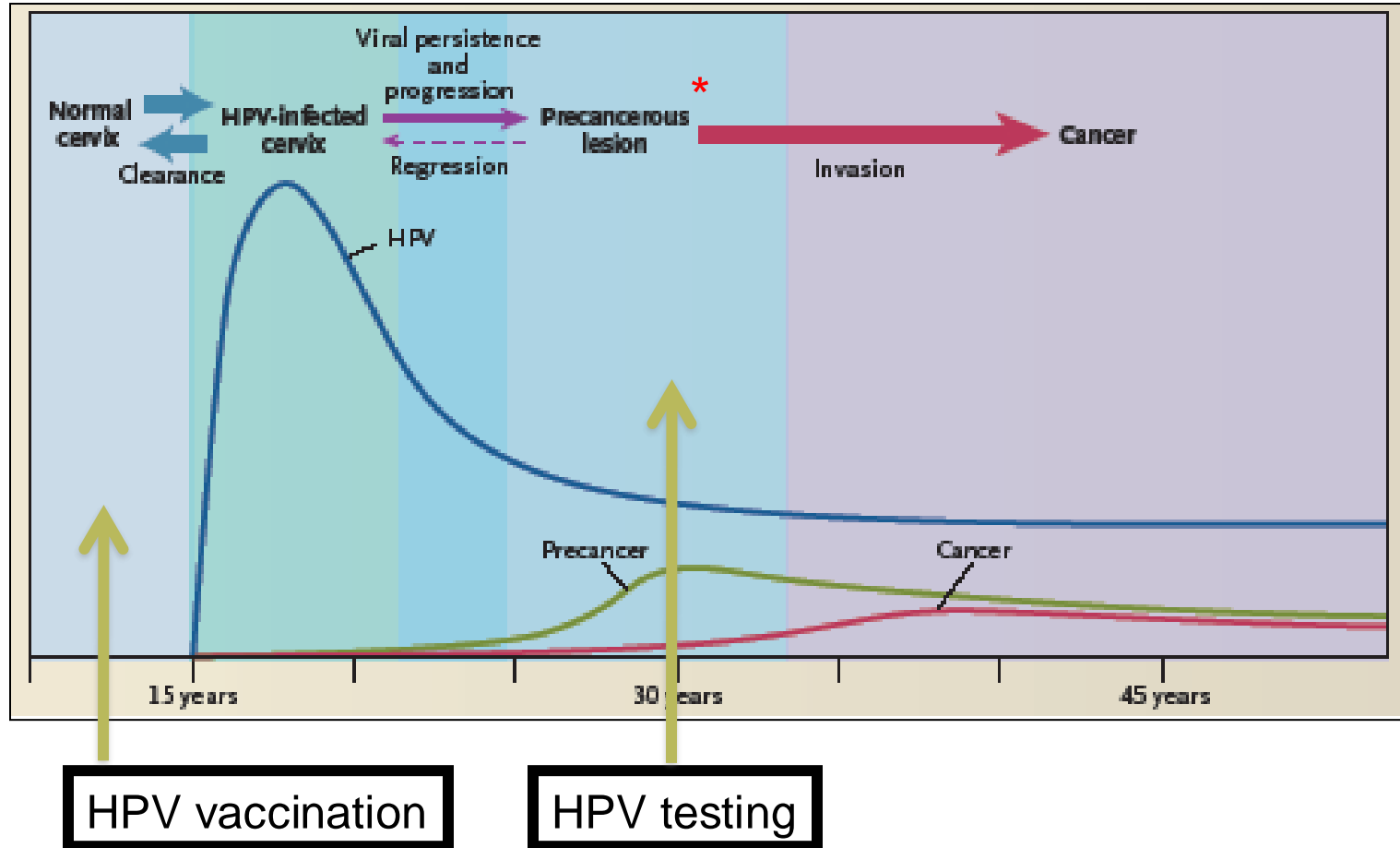
The discovery of HPV as the main cause of cervical cancer ...

- ✓ The old stepwise progression pathology model (low-grade to high-grade morphologic changes) has been replaced by a 4-stage approach:
 - ✓ HPV acquisition
 - ✓ HPV persistence (or clearance)
 - ✓ Progression of a persisting infection to cervical pre-cancer
 - ✓ Invasion (Wright & Schiffman, 2003)



**HPV Vaccination
&
HPV Testing**

The Promise of Cervical Cancer Prevention





VACCINATE your children against HPV infection. The HPV vaccine is for boys and girls.

Get **SCREENED** for cervical cancer.

FOLLOW-UP & FOLLOW THROUGH

Follow-up with a health care provider if your cervical cancer screening is abnormal





9-12 YEARS OF AGE

The American Cancer Society recommends that boys and girls between the ages of 9-12 years get the HPV vaccine.

TWO DOSES
6-12 months apart



13-14 YEARS OF AGE

You can catch up ...

TWO DOSES
6-12 months apart



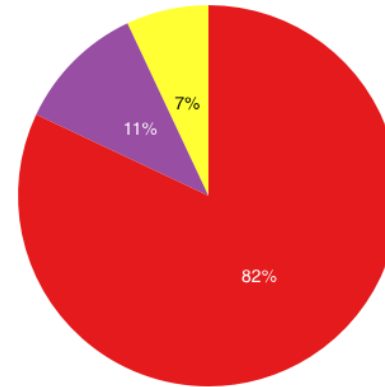
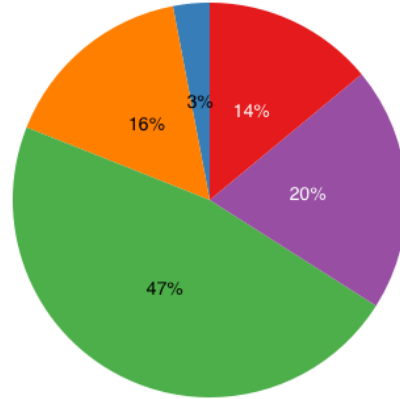
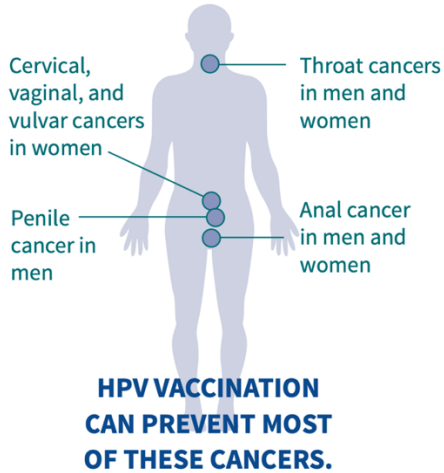
15-26 YEARS OF AGE

Because this is a little later, teenagers will need

THREE DOSES
dose, 2nd dose 1 to 2 months later, and 3rd dose 6 months after the 1st dose.



Additional Benefits of the HPV Vaccine HPV-Associated Cancers



Cancer Types

- Vagina
- Vulva
- Cervix
- Anus*
- Oropharynx
- Penis

Between 2015 and 2019 an estimated 47,199 new cases of HPV-associated cancers in the U.S. 26,177 among women and 21,022 among men
<https://www.cdc.gov/united-states-cancer-statistics/publications/hpv-associated-cancers.html>

FULL DOSE

The HPV vaccine offers the best protection to girls and boys who complete all the recommended HPV vaccination doses.

EFFECTIVE

Studies have shown that this vaccine provides almost 100% protection against the type of HPV it targets.

SAFE

The HPV vaccine went through years of extensive safety testing before licensed by the FDA.

SIDE EFFECTS

Side effects are the ones common to most injectable vaccines: sore arm or itching at the site of injection, headache, high temperature, shivery, feeling sick (nausea).

NO COST

It is covered by most health insurance plans. The Vaccines for Children (VCF) program provides vaccines for children 18 years of age & younger who are eligible.



The purpose of cervical cancer screening is to detect changes **BEFORE** it turns into cancer, and thus **PREVENTING** the disease.

Ages 21 to 65

Cervical cancer screening is recommended for women between **21 and 65 years of age**

Every 3 Years

Women should be screened **every three years**. For women who want to extend their screening interval, HPV co-testing every 5 years is an option.



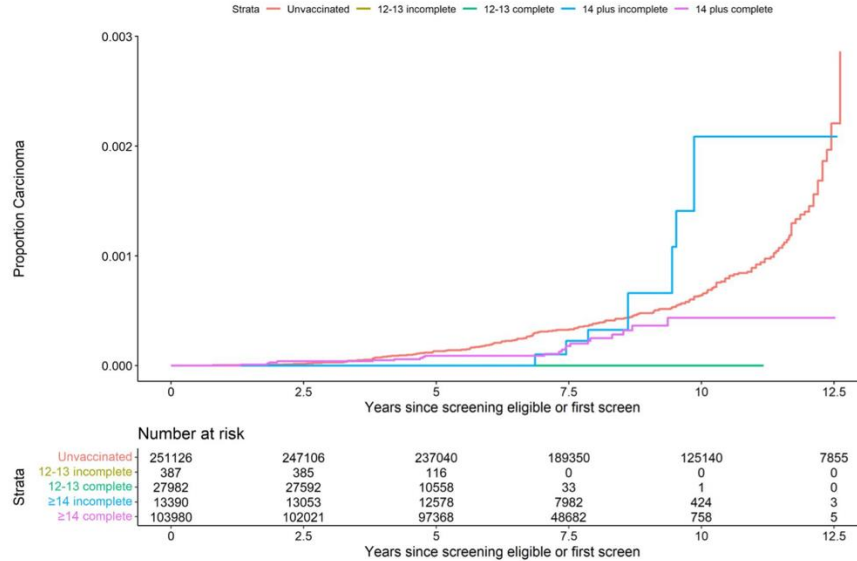


Figure 3. Kaplan-Meier curve reflecting diagnosis of cervical carcinoma as time in the screening program increases, stratified by vaccination status and age at vaccination. Vaccination status: Unvaccinated (no doses given), Incomplete (1 dose or 2 doses 1 month apart), and Complete (2 doses at least 5 months apart or 3 doses). Note that although the ≥14 years age band was divided into strata for analysis of vaccine effectiveness, the numbers of cases in some strata are small and, for avoidance of inadvertent disclosure, the data for the ≥14 age band are presented together.



JNCI: Journal of the National Cancer Institute, 2024, 116(6), 857–865
<https://doi.org/10.1093/jnci/djad263>
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 Article

Invasive cervical cancer incidence following bivalent human papillomavirus vaccination: a population-based observational study of age at immunization, dose, and deprivation

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No invasive cervical cancer among women vaccinated between the ages of 12 or 13



- **HPV testing** looks for the presence of high-risk HPV virus (hrHPV)
- **Cervical cytology** determines whether there are changes in the cells
- **Co-testing** does both
- Recent FDA approval for self-collection for HPV testing in clinics



- Positive results do not mean the woman has cancer. Remember that screening can detect changes **BEFORE** it turns into cancer!
- It is very important that women follow up and follow the provider's recommendations, which can be something as simple just watching the changes over time.



Smallpox

- The great scourge of mankind
- Has crippled, disfigured and/or killed one quarter of all humanity
- In the 20th Century alone, nearly 200 million deaths



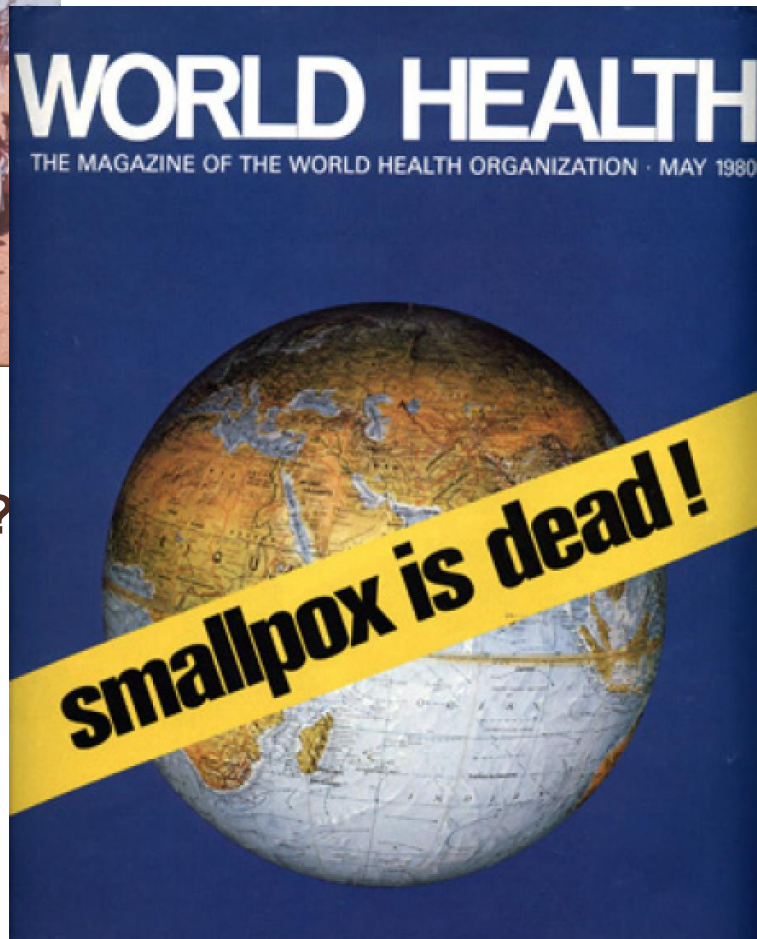
The Impact of Vaccines

Disease	Average Annual Reported Cases Pre-vaccine*	Cases in U.S. 2013**	Provisional Cases in U.S. 2014***	Provisional % Reduction In U.S. 2014
Smallpox	48,164	Eradicated worldwide in 1980		
Diphtheria	175,885	0	1	>99.9%
Measles	503,282	187	628	>99.9%
Mumps	152,209	584	1,151	99.2%
Pertussis	147,271	28,639	28,660	80.6%
Polio (paralytic)	16,316	1	0	100%
Rubella	47,745	9	8	>99.9%
Congenital Rubella Syndrome	823	1	0	100%
Tetanus	1,314	26	21	98.4%
<i>H. Influenzae</i> Type b Age<5 years	20,000	31	27	99.9%

*MMWR 48(12);243-248 April 2, 1999

***MMWR 63(53);733-746 January 9, 2015

** MMWR 63(32);702-715 August 15, 2014



Why can't we do the same for HPV and cervical cancer?



It takes 3 steps:

