

# ***Cervical Cancer: Epidemiology, Risk Factors and Prevention***

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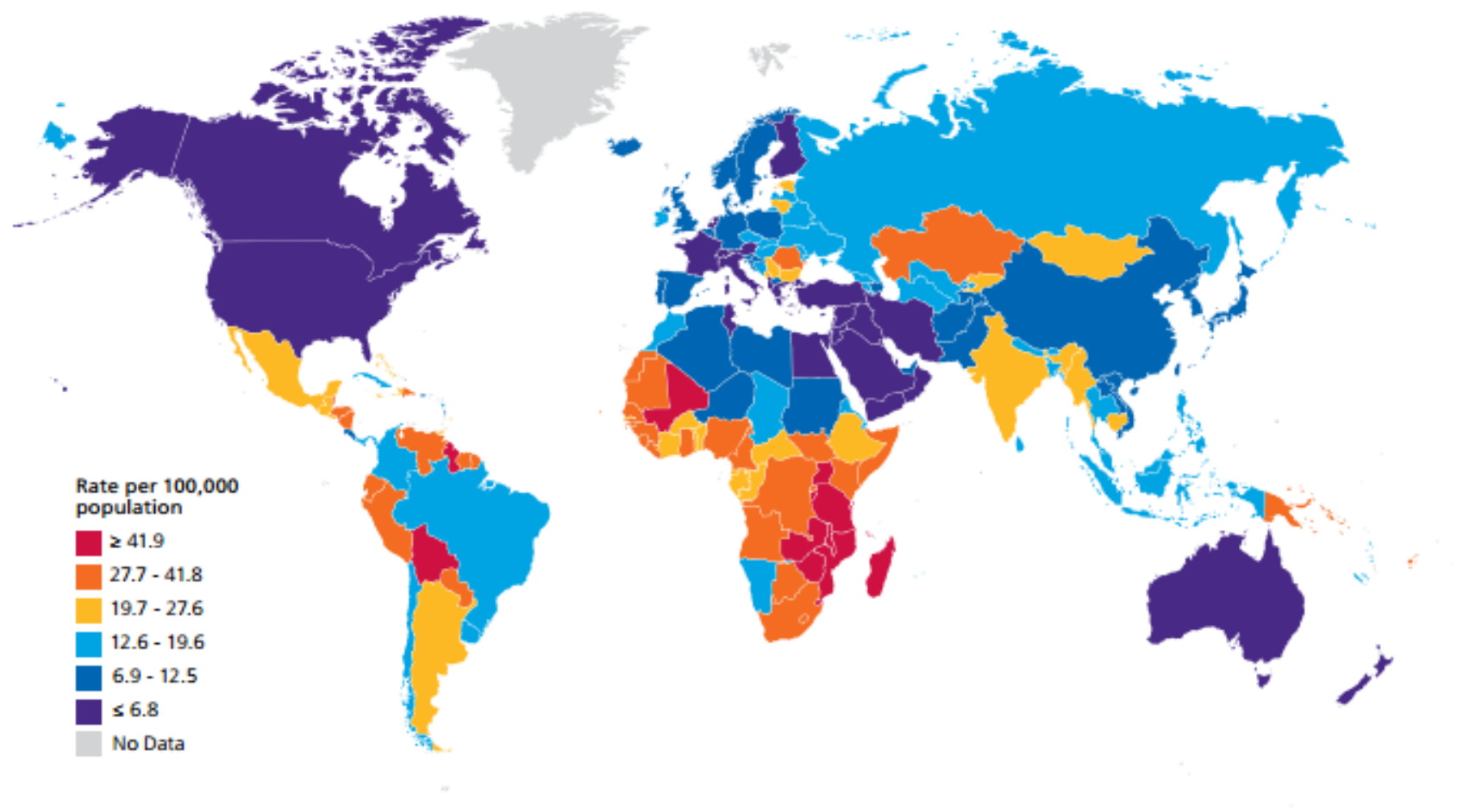
# Cervical Cancer

- CC continues to be a public health problem
  - developing countries
  - socially disadvantaged populations
- CC second leading malignant neoplasm worldwide
- Preceded only by breast cancer
- Accounts for ~12% of all cancers in women
- Affects multiparous women in the early post-menopausal years
- Enormous social impact

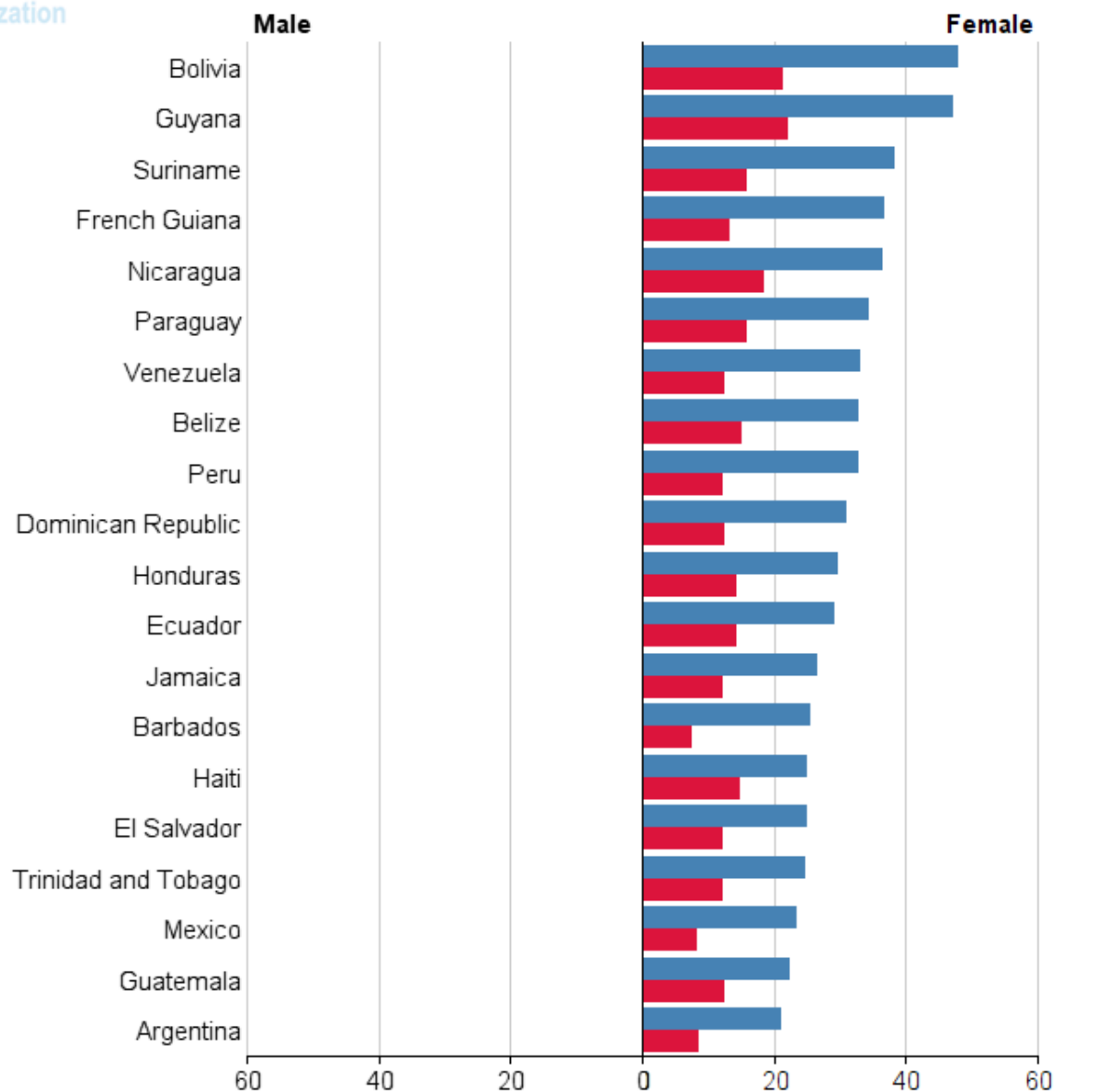
# Cervical Cancer Worldwide

- Incidence and mortality rates for CC show a wide geographic variation
- Higher incidence and mortality rates are reported in developing countries
  - approximately 80% of all CC cases and deaths

**Figure 17. International Variation in Uterine Cervix Cancer Incidence Rates\*, 2012**



\*Per 100,000, age standardized to the World Standard Population. Source: GLOBOCAN 2012.



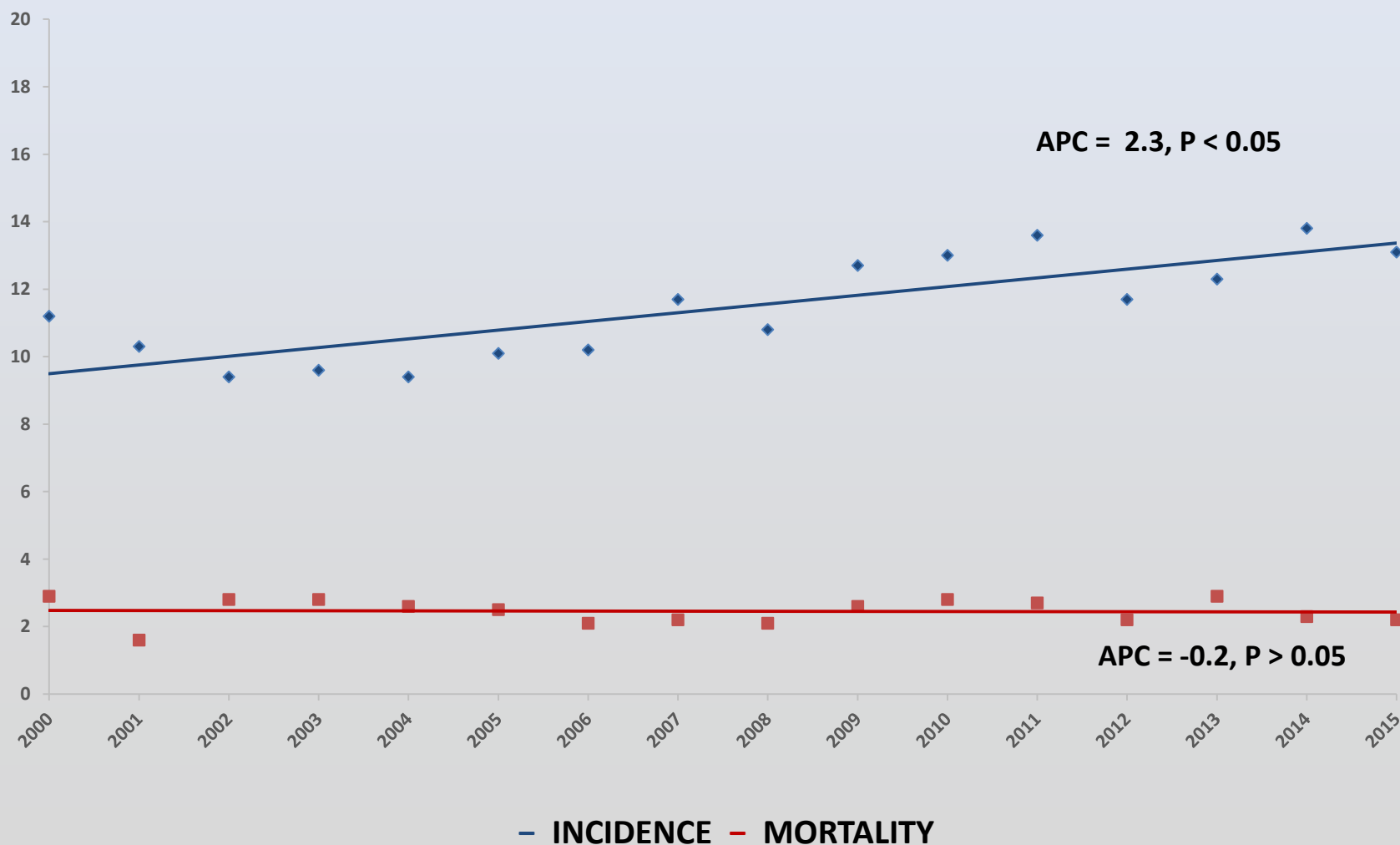
# ***CERVICAL CANCER IN PUERTO RICO***



# Cervical Cancer in Puerto Rico, 2011-2015

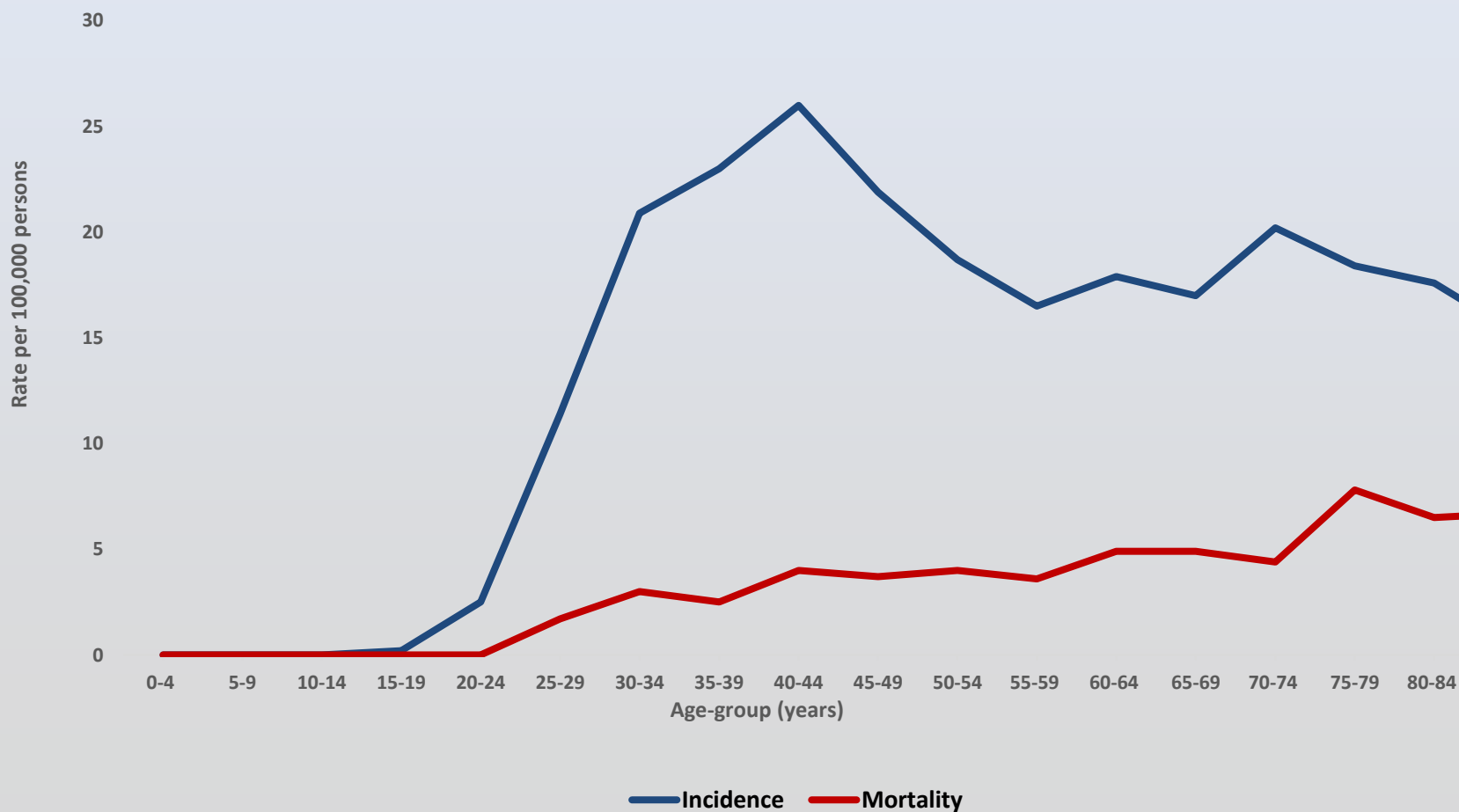
- **7<sup>th</sup>** most diagnosed cancer among women in Puerto Rico
- Accounted for **3.6%** of all cancer cases and **2.3%** of all cancer deaths in women
- **1,263** cases (~**253** cases/yr.)
- **263** deaths (~**53** deaths/yr.)
- Median age at Diagnosis: **48** years (U.S. 50 yr.)
- Median age at Death: **58** years (U.S. 48 yr.)

# TRENDS IN INCIDENCE AND MORTALITY FOR CERVICAL CANCER FOR FEMALES: PUERTO RICO, 2000-2015

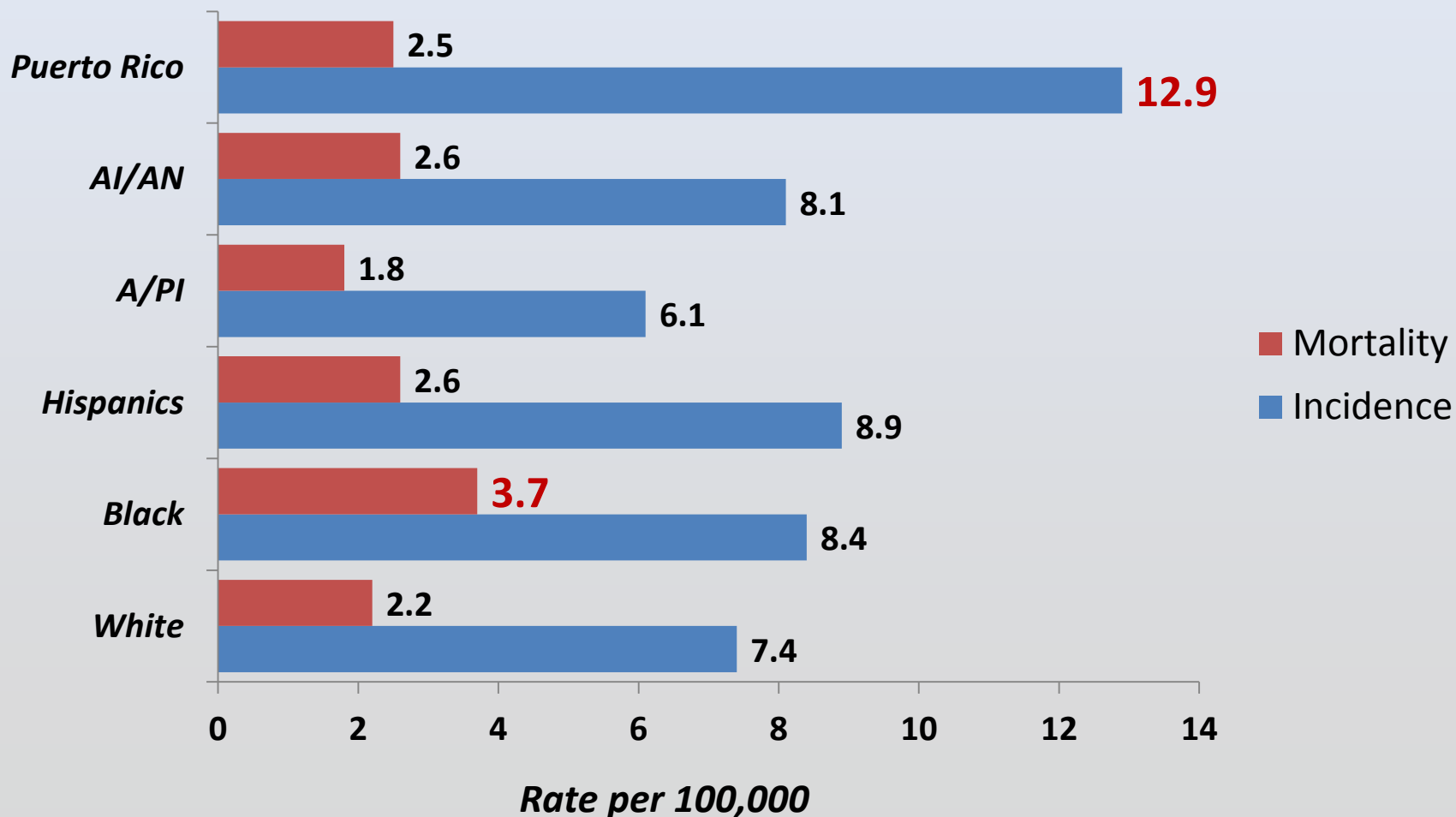




# Age-specific Incidence and Mortality Rates of Cervical Cancer: Puerto Rico, 2011-2015

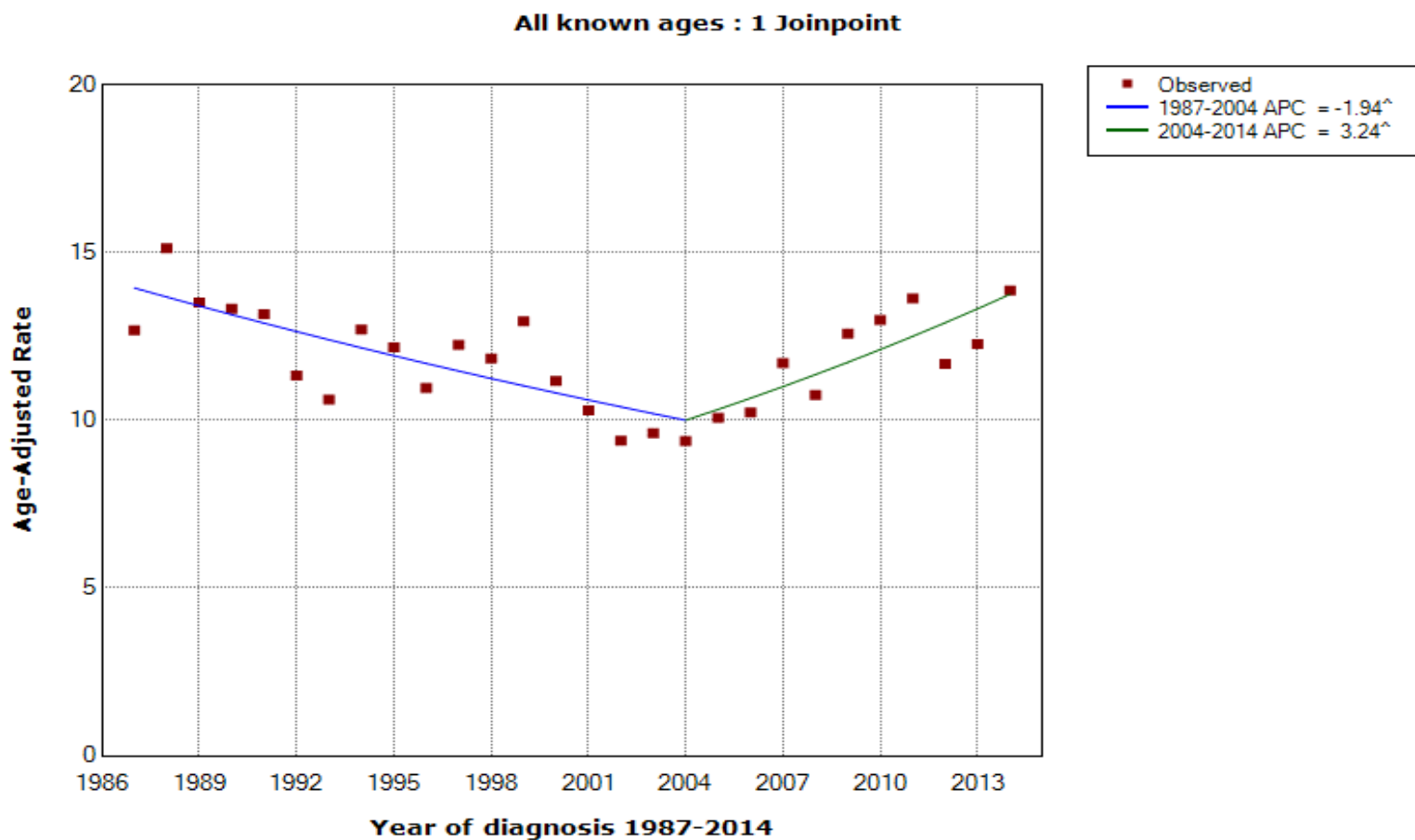


# Age-Adjusted\* Incidence Rate of Cervical Cancer in Puerto Rico and U.S. by Race/Ethnicity: 2011-2015



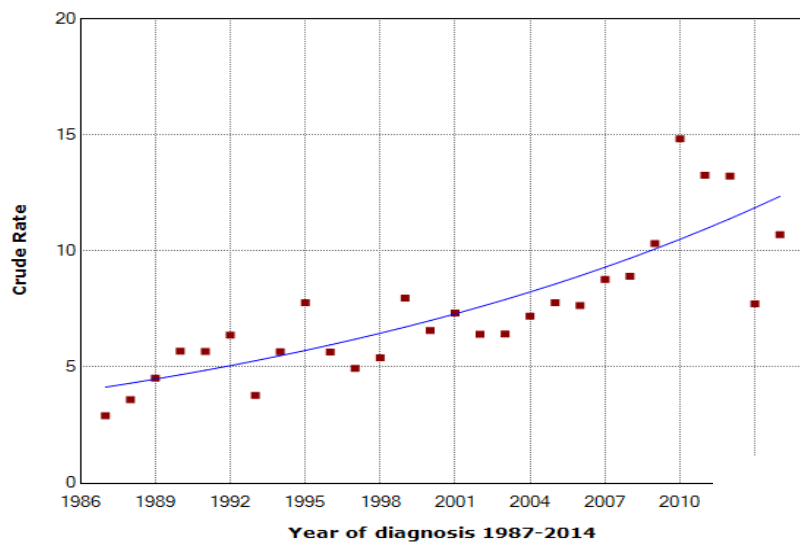
Rate Adjusted to the 2000 U.S. Std. Pop

# Cervical cancer Incidence trends: overall

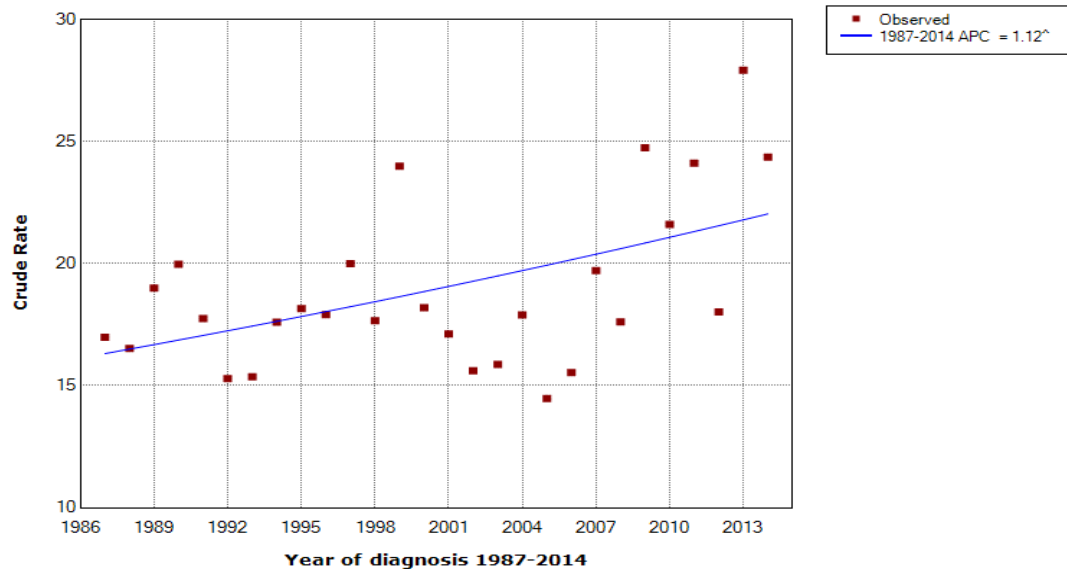


# Cervical Cancer Incidence Trends by age groups

20-34 : 0 Joinpoints

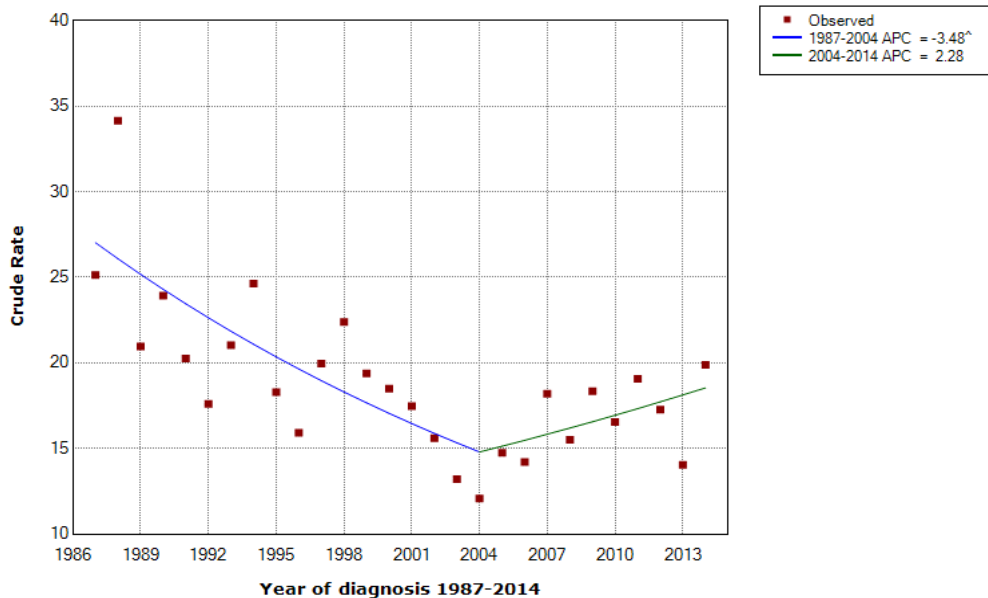


35-49 : 0 Joinpoints

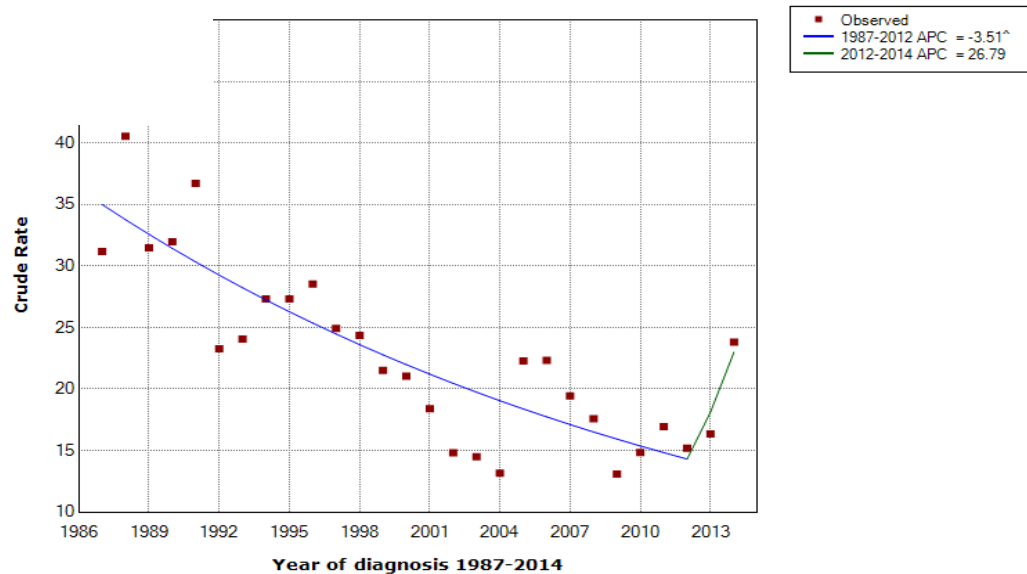


# Cervical Cancer Incidence Trends by age groups

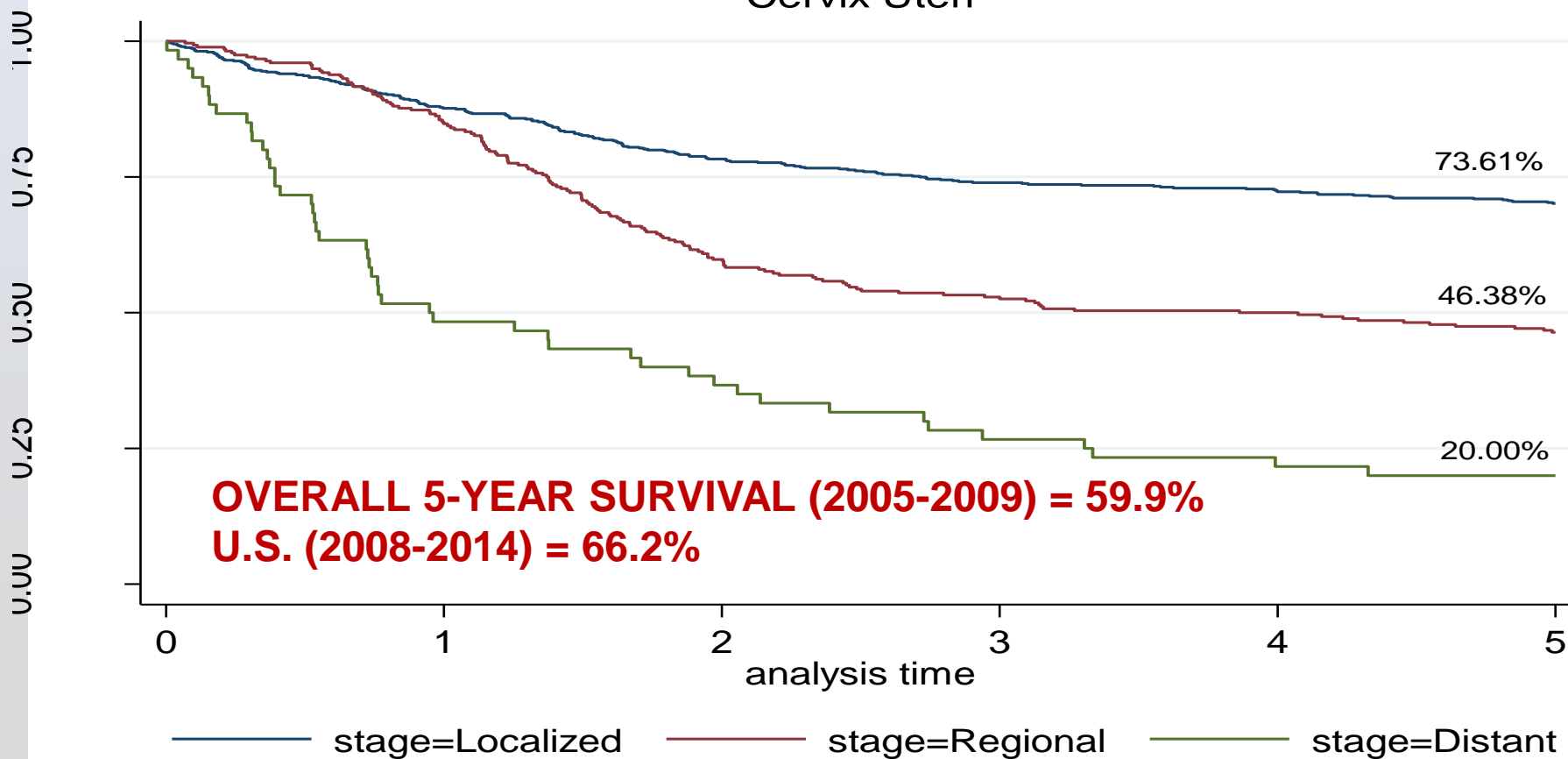
50-64 : 1 Joinpoint



65-79 : 1 Joinpoint



## Kaplan-Meier survival estimates Cervix Uteri



**Coalición para el  
Control de Cáncer  
de Puerto Rico**  
PROGRAMA DE CONTROL COMPRENSIVO DE CÁNCER

**REGISTRO  
CENTRAL  
DE CÁNCER**  
DE PUERTO RICO



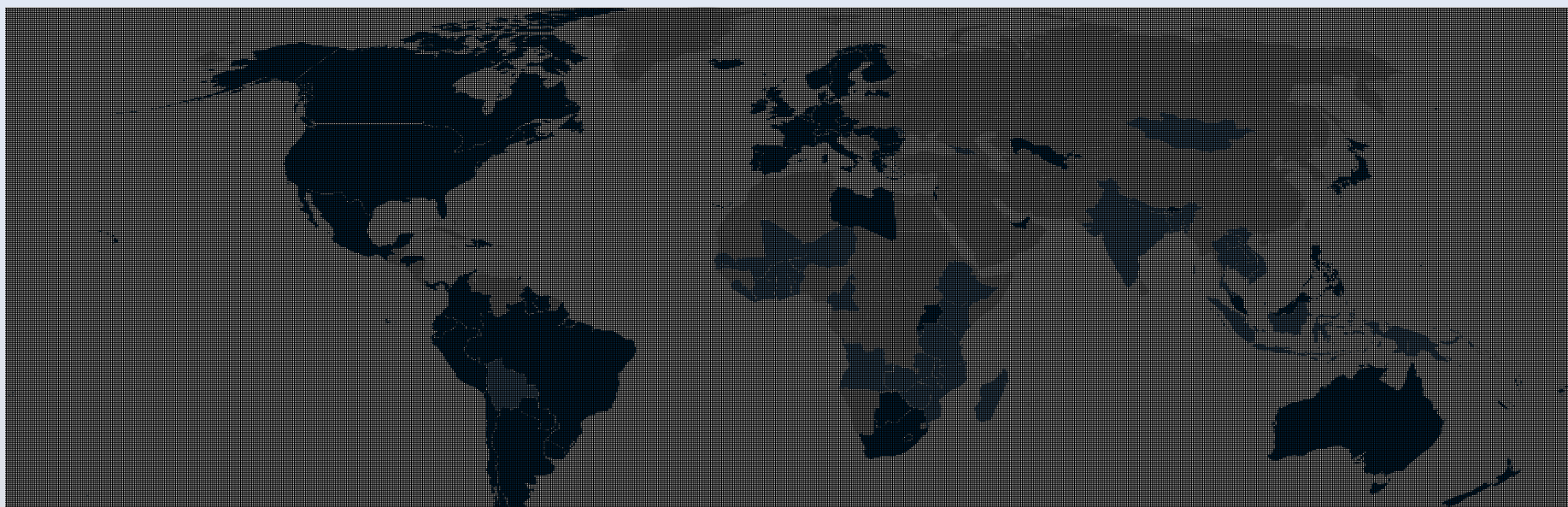
**PUERTO RICO  
BREAST & CERVICAL  
CANCER**  
PREVENTION AND EARLY  
DETECTION PROGRAM

**PUERTO RICO  
COLORECTAL  
CANCER**  
CONTROL PROGRAM

# *Cervical Cancer Prevention*







## National programs

American Samoa  
Andorra  
Anguilla  
Argentina  
Aruba  
Australia  
Austria  
Bahamas  
Barbados  
Belgium  
Belize  
Bermuda  
Bhutan  
Bonaire  
Botswana  
Brazil  
Brunei  
Bulgaria  
Canada  
Cayman Islands  
Chile  
Colombia  
Cook Islands

Curacao  
Czech Republic  
Denmark  
Dominican Republic  
Ecuador  
Fiji  
Finland  
France  
French Polynesia  
Germany  
Greece  
Guam  
Guyana  
Honduras  
Hungary  
Iceland  
Ireland  
Israel  
Italy  
Japan  
Kiribati  
Latvia  
Lesotho

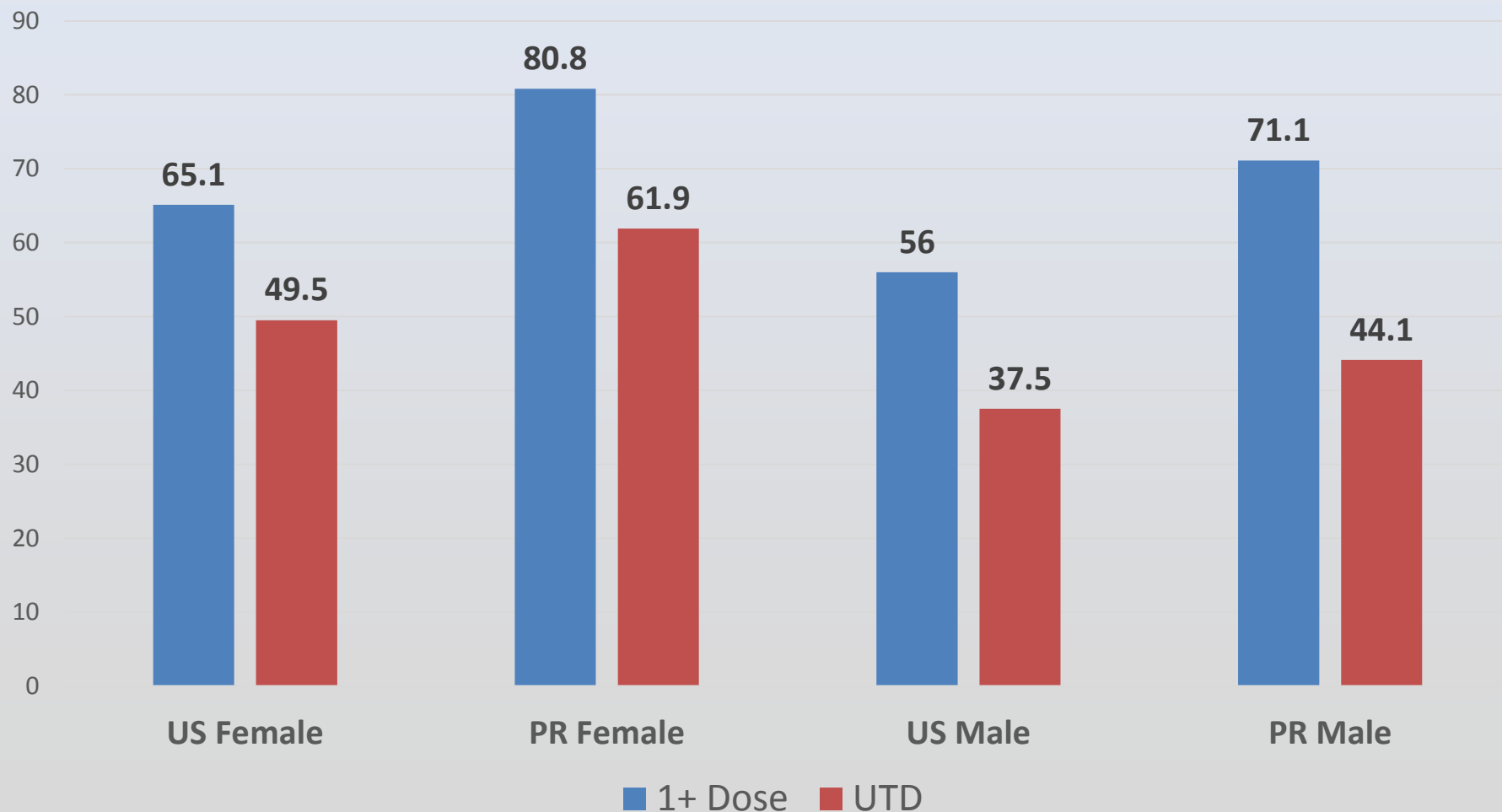
Libya  
Lichtenstein  
Luxembourg  
Macedonia  
Malaysia  
Malta  
Marshall Islands  
Mexico  
Micronesia  
Monaco  
Netherlands  
New Caledonia  
New Zealand  
Niue  
Northern Marianas  
Norway  
Palau  
Panama  
Paraguay  
Peru  
Philippines  
Portugal  
Puerto Rico

Romania  
Rwanda  
Samoa  
San Marino  
Seychelles  
Singapore  
Slovenia  
South Africa  
Spain  
St. Eustatius  
Suriname  
Sweden  
Switzerland  
Trinidad and Tobago  
Uganda  
United Arab Emirates  
United Kingdom  
United States  
Uruguay  
US Virgin Islands  
Uzbekistan  
Vanuatu

## Pilot programs

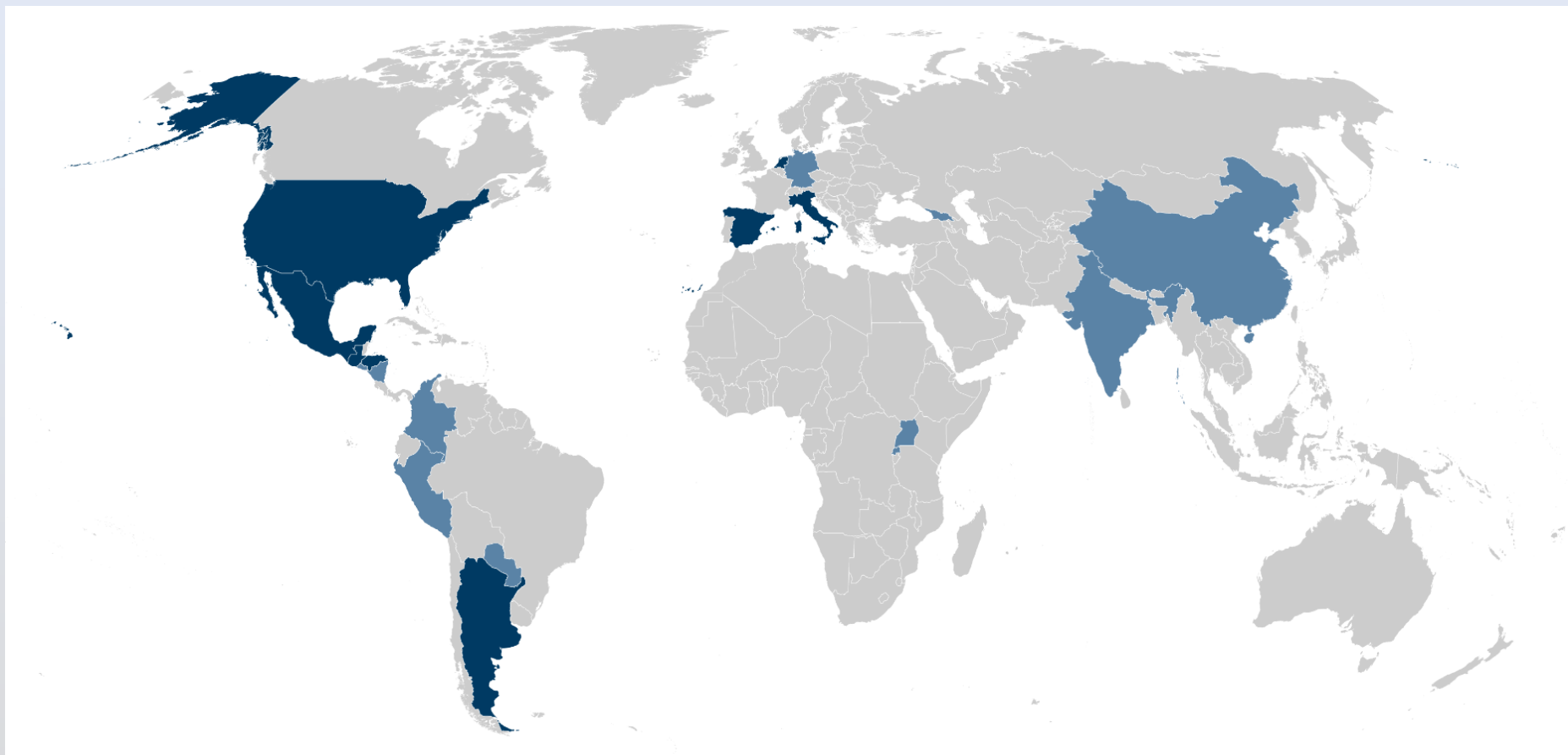
Angola  
Bangladesh  
Benin  
Bolivia  
Burkina Faso  
Burundi  
Cambodia  
Cameroon  
Cote d'Ivoire  
Ethiopia  
Gambia  
Georgia  
Ghana  
Haiti  
India  
Indonesia  
Kenya  
Lao PDR  
Liberia  
Madagascar  
Malawi  
Mali  
Moldova  
Mongolia  
Mozambique  
Nepal  
Niger  
Papua New Guinea  
Sao Tome  
Senegal  
Sierra Leone  
Solomon Islands  
Tanzania  
Thailand  
Togo  
Vietnam  
Zambia  
Zimbabwe

# HPV Immunization Rates among 13-17 years in U.S. and PR: NIS 2016





# *Cervical Cancer Screening and Early Detection*



## National programs

Argentina  
Guatemala  
Honduras  
Italy  
Mexico  
Netherlands

## Pilot programs

China  
Colombia  
El Salvador  
Germany  
India  
Nicaragua  
Paraguay  
Peru  
Republic of Georgia  
Rwanda  
Uganda

# Cervical Cancer Screening Behavior in U.S. and Puerto Rico, BRFSS 2016

Screening Test	U.S. (Md%)	Puerto Rico
Women 21-64 Pap Smear within last 3-yr.	<b>79.8%</b>	<b>77.8%</b>

Screening Test	PR 1996	PR 2010	PR 2012	PR 2014	PR 2016
Pap Smear	<b>70%</b>	<b>75%</b>	<b>71%</b>	<b>77.4%</b>	<b>77.8%</b>

  
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# Thank you

