

Cervical cancer - knowledge, prevention and exposure to risk factors among students from various countries



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Disclosures

- No financial relationships or conflict of interest to disclose



Background

- Cervical cancer: most common among women worldwide
- High effectiveness of applied prevention
- HPV and cervical cancer: different incidence and mortality rates among countries
- Awareness about prevention among young population → incidence and mortality in future



Aim of the study

- Comparison of knowledge, prevention and exposure to risk factors among young population in different countries
- Comparison of above factors with mortality and morbidity in these countries



Materials and methods

- Cross-sectional study
- Questionnaire
- Coordinators in 10 countries: survey translation if necessary, survey distribution, data collection
- Online version: distribution via social media and university e-mailing systems
- Paper version: distribution during student conferences, lectures and in libraries



Comparison of incidence and mortality

- Source: GLOBOCAN 2012: Estimated Cancer Incidence, Mortality and Prevalence Worldwide in 2012 by WHO International Agency for Research on Cancer <http://globocan.iarc.fr/>
- Age-world-standardized incidence rate ASR(W): above 10 assessed as high
- Age-world-standardized mortality rate ASR(W): above 5 assessed as high



Comparison of incidence and mortality

- Countries with high cervical cancer incidence and mortality rate:
Kosovo, Macedonia, Poland, Romania, Slovakia: 3045 completed surveys
- Countries with low cervical cancer incidence and mortality rate:
Austria, Egypt, France, Italy, UK: 2587 completed surveys



Cross-sectional survey: 5632 answers

Study group characteristics

Country	Incidence [ASR(W)]	Mortality [ASR(W)]	Answers	Medical Students	Women	Mean age
Austria	5.8	2.3	203	29%	87%	22.5
Egypt	2.3	1.8	159	84%	58%	22
France	6.8	2.2	1026	12%	92%	21
Italy	6.7	2.1	1106	33%	84%	23
UK	7.1	2.0	93	75%	89%	20.5
Macedonia	12.4	5.5	1007	41%	66%	21
Poland	12.2	5.7	712	36%	86%	22
Romania	28.7	15.8	122	80%	82%	22
Slovakia	16.1	7.2	192	19%	91%	21
Kosovo	23.8	9.2	1012	18%	51%	22



Knowledge: cervical cancer risk factors

% of positive answers

Country	Early sexual activity	High number of sexual partners	High number of pregnancies	High number of deliveries	Immuno-suppression	Smoking	History of STI	Poverty
Austria	39%	73%	14%	18%	60%	66%	65%	16%
Egypt	38%	70%	17%	23%	36%	52%	69%	25%
France	37%	53%	12%	12%	33%	27%	63%	9%
Italy	30%	68%	11%	4%	42%	43%	54%	10%
UK	43%	57%	21%	14%	42%	54%	63%	16%
Macedonia	40%	56%	20%	8%	19%	45%	62%	12%
Poland	47%	89%	35%	21%	38%	61%	78%	31%
Romania	62%	92%	29%	26%	88%	78%	95%	26%
Slovakia	39%	66%	17%	16%	34%	46%	74%	5%
Kosovo	30%	45%	54%	27%	27%	31%	37%	28%



Knowledge: cervical cancer risk factors

% of positive answers

Country	High number of hospitalizations	Early menarche	Early menopause	Poor diet	Drug abuse	Alcohol abuse	Use of condoms
Austria	7%	18%	9%	19%	25%	24%	3%
Egypt	37%	16%	13%	24%	22%	31%	20%
France	4%	11%	10%	9%	24%	17%	6%
Italy	5%	11%	11%	20%	26%	25%	5%
UK	0.1%	15%	10%	14%	21%	25%	0.3%
Macedonia	7%	9%	13%	19%	19%	12%	21%
Poland	6%	11%	9%	18%	38%	28%	16%
Romania	4%	12%	16%	18%	18%	16%	5%
Slovakia	5%	10%	13%	19%	33%	34%	9%
Kosovo	26%	29%	27%	27%	32%	27%	23%



Knowledge: age of the highest incidence

% of positive answers

Country	< 30	30-39	40-49	50-59	60-69	70-80	> 80	I don't know
Austria	22%	22%	25%	19%	2%	0	0	10%
Egypt	7%	30%	34%	12%	6%	0	0	11%
France	36%	24%	21%	11%	1%	0	0	7%
Italy	22%	28%	26%	11%	1%	0	0	12%
UK	24%	42%	18%	7%	2%	0	0	7%
Macedonia	15%	29%	29%	9%	1%	0.5%	0.5%	16%
Poland	9%	28%	32%	19%	0	0.2%	0.3%	10.5%
Romania	13%	34%	28%	17%	0	1%	0	7%
Slovakia	17%	34%	34%	12%	0	0	0	3%
Kosovo	17%	17%	19%	19%	18%	0	0	10%



„Do you know what HPV is?“

subjective assessment

Country	YES	NO
Austria	80%	20%
Egypt	73%	27%
France	62%	38%
Italy	73%	27%
UK	62%	38%
Macedonia	58%	42%
Poland	72%	28%
Romania	88%	12%
Slovakia	76%	24%
Kosovo	4.5%	95.5%



Knowledge: HPV may infect

% of positive answers

Country	Women	Men	Women and men
Austria	4.3%	0.7%	95%
Egypt	0	0	100%
France	25%	0.7%	74.3%
Italy	9%	0.2%	90.8%
UK	2%	0%	98%
Macedonia	30%	1%	69%
Poland	9%	3%	88%
Romania	10%	0	90%
Slovakia	10%	0.7%	89.3%
Kosovo	33%	33%	34%



Knowledge: HPV infection symptoms in women

% of positive answers

Country	Severe	Mild	No symptoms
Austria	33%	9%	58%
Egypt	58%	34%	8%
France	47%	21%	31%
Italy	29%	18%	53%
UK	12%	14%	74%
Macedonia	49%	40%	11%
Poland	77%	6%	17%
Romania	45%	23%	32%
Slovakia	34%	7%	59%
Kosovo	32%	33%	34%



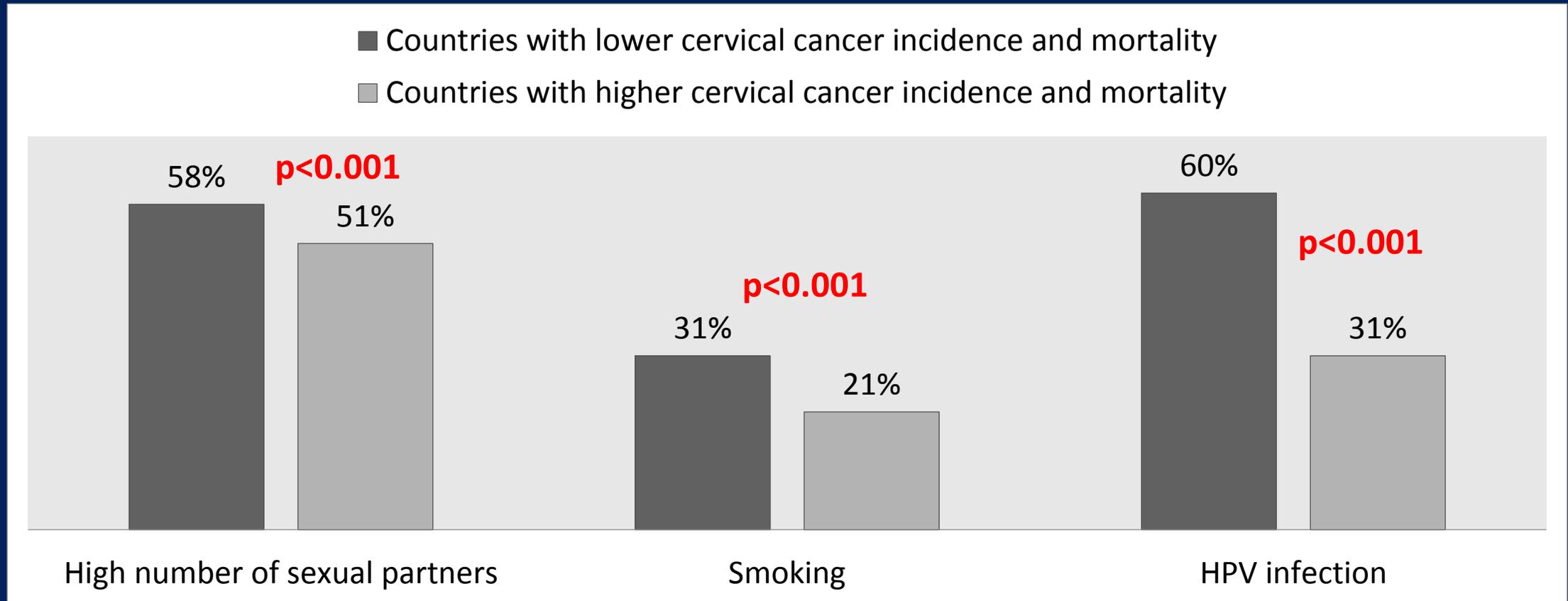
Knowledge: HPV infection symptoms in men

% of positive answers

Country	Severe	Mild	No symptoms
Austria	2%	11%	87%
Egypt	19%	58%	24%
France	7%	20%	72%
Italy	2%	10%	88%
UK	0.2%	10.8%	89%
Macedonia	12%	50%	38%
Poland	2%	48%	50%
Romania	8%	22%	70%
Slovakia	0.7%	11%	88.3%
Kosovo	30%	32%	38%

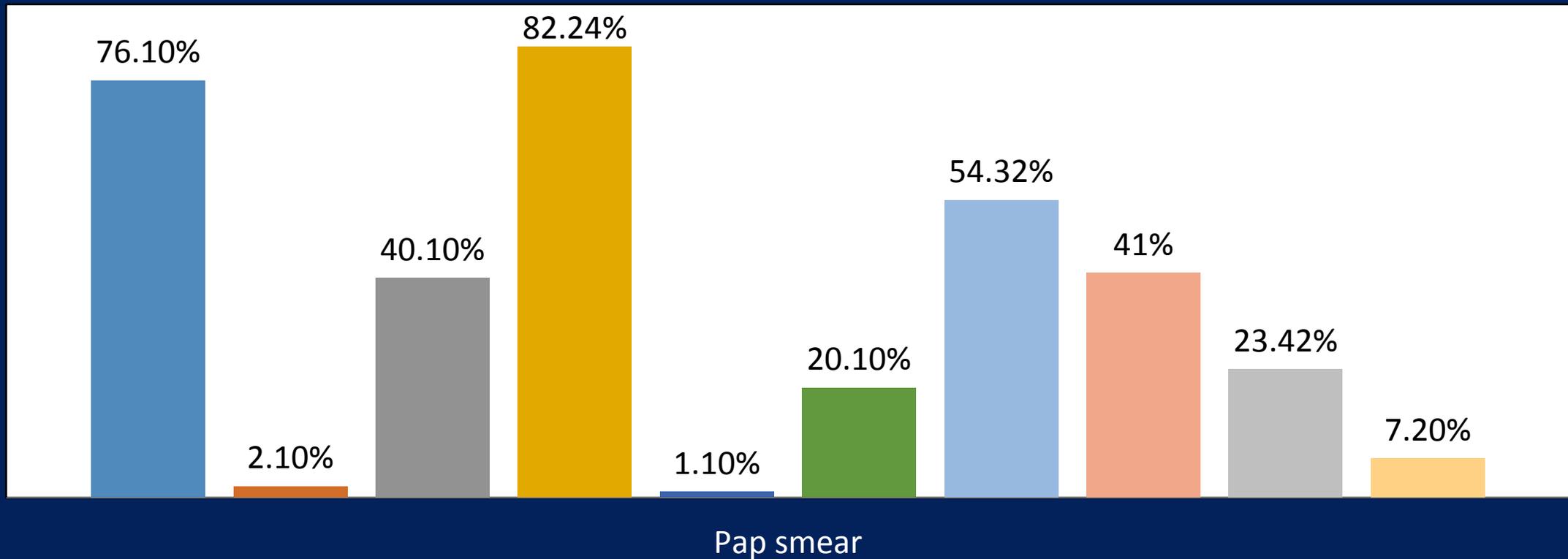


Knowledge of non-medical students: cervical cancer risk factors



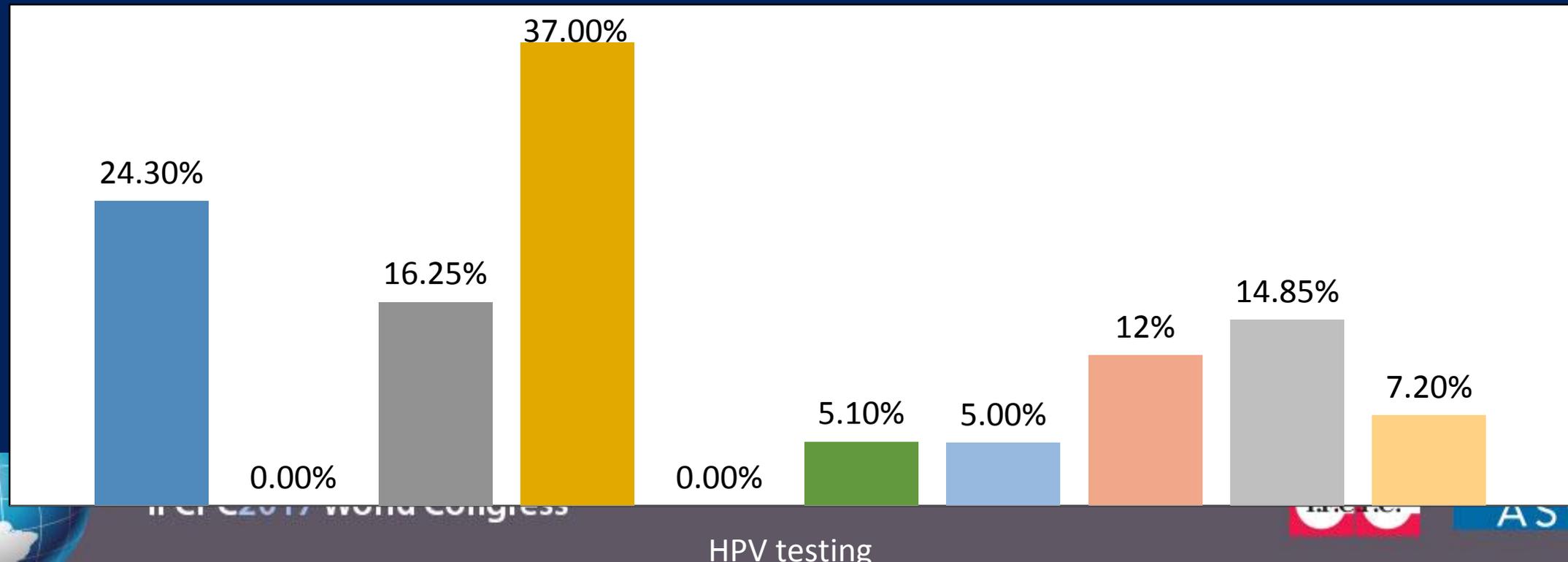
Cervical cancer: prevention among female students – Pap smear

■ Austria ■ Egypt ■ France ■ Italy ■ Kosovo ■ Macedonia ■ Poland ■ Romania ■ Slovakia ■ UK



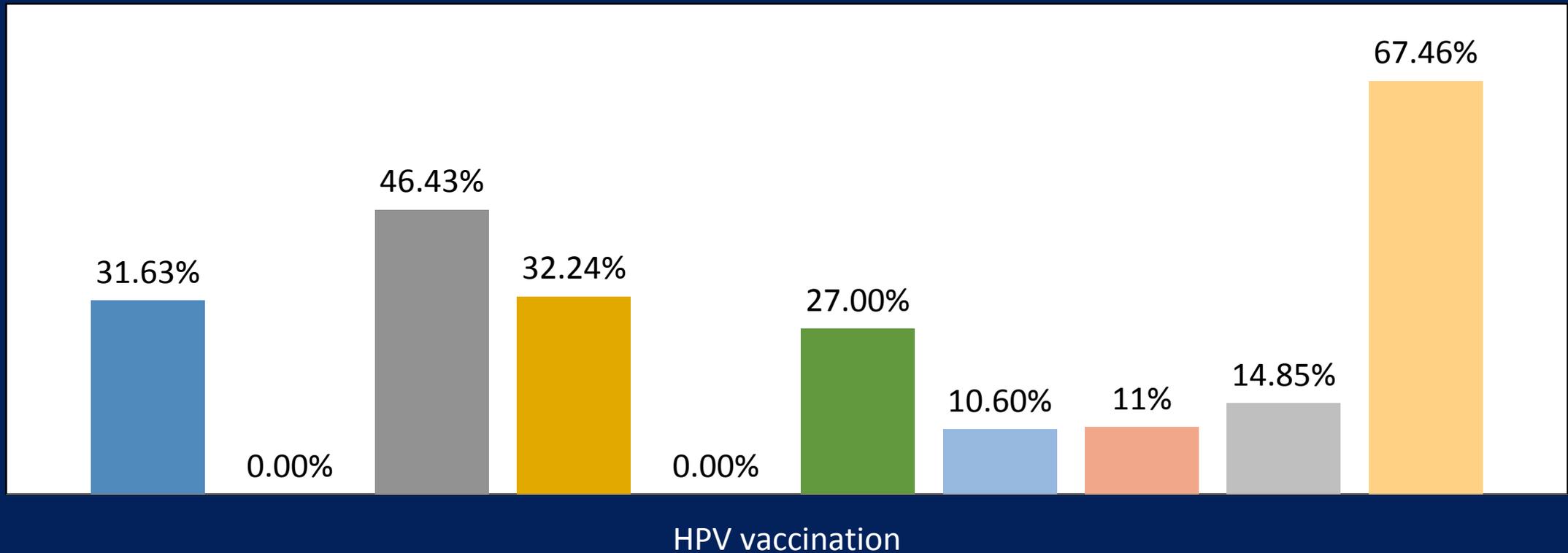
Cervical cancer: prevention among female students – HPV testing

■ Austria ■ Egypt ■ France ■ Italy ■ Kosovo ■ Macedonia ■ Poland ■ Romania ■ Slovakia ■ UK

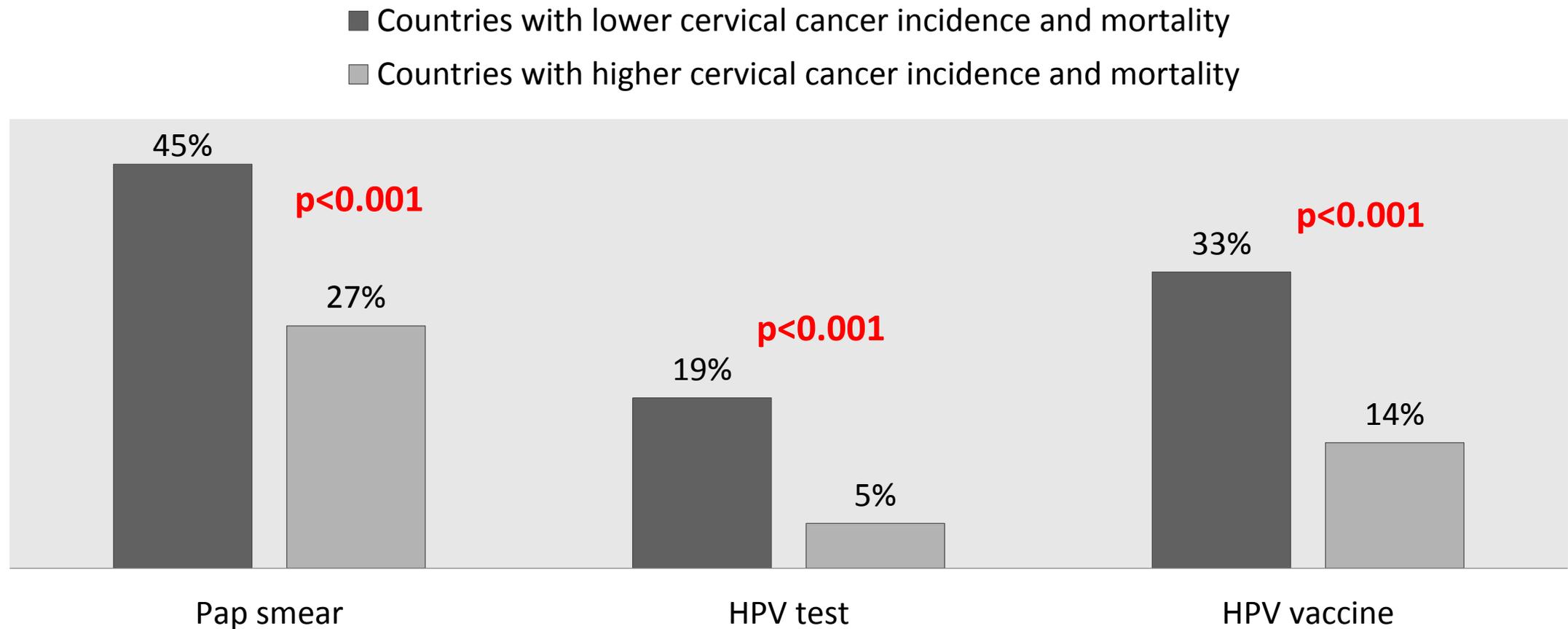


Cervical cancer: prevention among female students – HPV vaccination

■ Austria ■ Egypt ■ France ■ Italy ■ Kosovo ■ Macedonia ■ Poland ■ Romania ■ Slovakia ■ UK



Prophylaxis among female students



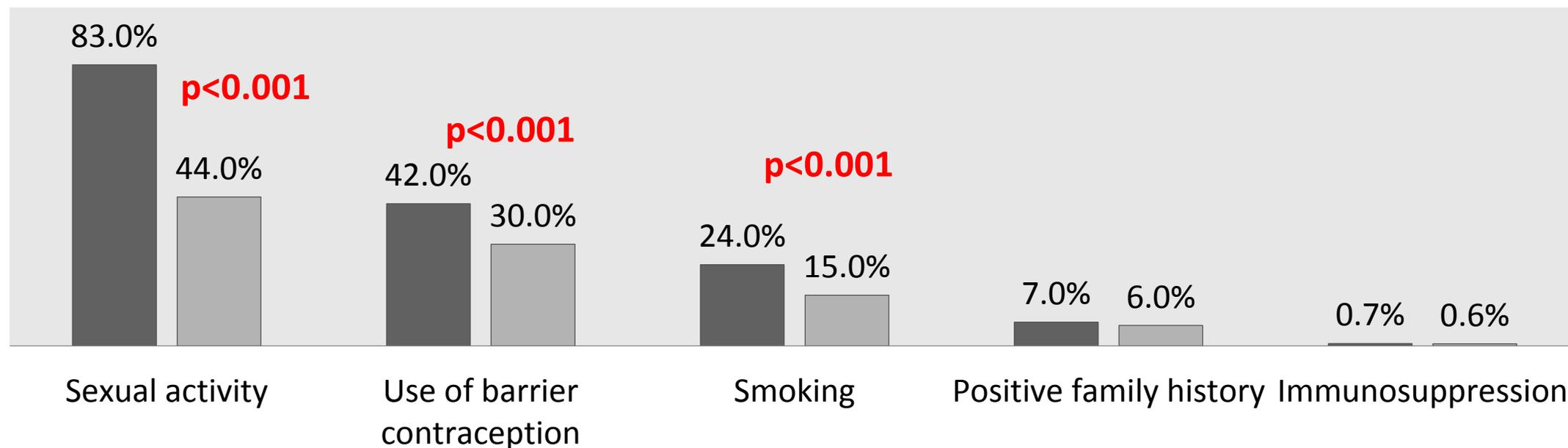
Exposure to risk factors

Country	Sexually active	Age at sexual initiation	Number of sexual partners	Use of barrier contraception	Smoking
Austria	91%	16.8 y/o	5.7	32%	22%
Egypt	6%	22 y/o	1.1	25%	4%
France	85%	16.8 y/o	4.8	54%	30%
Italy	87%	17.2 y/o	3.8	56%	22%
UK	76%	16.7 y/o	4.8	57%	6%
Macedonia	61%	17.8 y/o	2.7	79%	21%
Poland	68%	18.6 y/o	2.9	68%	18%
Romania	74%	17.9 y/o	4.6	83%	21%
Slovakia	79%	17.4 y/o	3.5	43%	14%
Kosovo	40%	18.9 y/o	1.8	51%	26%



Exposure to risk factors in female students

- Countries with lower cervical cancer incidence and mortality
- Countries with higher cervical cancer incidence and mortality



Conclusions

Countries with lower cervical cancer incidence and mortality:

- Higher awareness of cervical cancer risk factors among non-medical students;
- Higher rate of performed Pap smears, HPV tests and HPV vaccinations.



Conclusions

In order to decrease incidence and mortality in the future:

- Education → Public Health Programmes
- Increasing access to preventive methods



Thank you for your attention!

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