#916 HUMAN PAPILLOMA VIRUS 16/18 GENOTYPING WITH DUAL STAINING FOR THE DETECTION OF HIGH GRADE CERVICAL INTRAEPITHELIAL NEOPLASIA IN WOMEN WITH LOW GRADE CYTOLOGY

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Introduction/Background Introduction: Cervical cytology is an established method for screening of cervical cancer, but there a lack of consensus regarding management of low grade smears.

This study was undertaken to compare the the performance of HPV 16/18 genotyping with p16/ki67 Dual staining for the detection of High Grade Cervical intraepithelial Neoplasia (HG CIN) in women with low grade cytology .

Methodology : 89 women between the age of 30–65 years, who had a Cervical Cytology report of ASCUS or LSIL were included. All cases were triaged with Human Papiloma Virus (HPV) 16 and 18 testing and also with P16/Ki 67 Dual Staining. All women also underwent Colposcopy and Biopsy from abnormal areas if detected or random cervical biopies were taken.A histopathology report of CIN 2or 3 was considered as true positive. The performance of both methods was evaluated .

Results HGCIN was found in 3.7%of ASCUS cases and 11.5%of LSIL cases. 26.2% of the study population were HPV 16/18 positive (in ASCUS cases 21.2% and in LSIL cases 33.2%) and 18.8% were Dual Stain Positive (in Ascus cases13.4% and in LSIS cases27.2%).Overall the Sensitivity, Specificity, Negative predictive Vaue and Accuracy of HPV 16/18 genotying to detect HGCIN was66.7%, 77.1%,90.1% and 76.2% whereas for Dual staining it was 66.6%, 84.8%,97.1%and 83.5% respectively. For ASCUS cytology, Dual staining had a higher Accuracy than HPV 16/18 genotyping at 86.5% versus 78.5% 16/18 genotypong for the detection of HGCIN. Similarly for LSIL cytology, Dual Staining had a higher Accuray at 78.8% versus 72.7% with 16/18 genotyping

Conclusion Both HPV 16/18 genotyping and Dual Staining are effective triage methods for the detection of HGCIN in women with Low Grade Cytology, but Dual Staining has a higher Specicificity and Accuracy than HPV 16/18 genotyping.

#930 HPV PREVENTION POLICY ATLAS EUROPE – TRACKING GOVERNMENT POLICIES IN EUROPE ON ACCESS TO HPV VACCINATION, SCREENING AND INFORMATION

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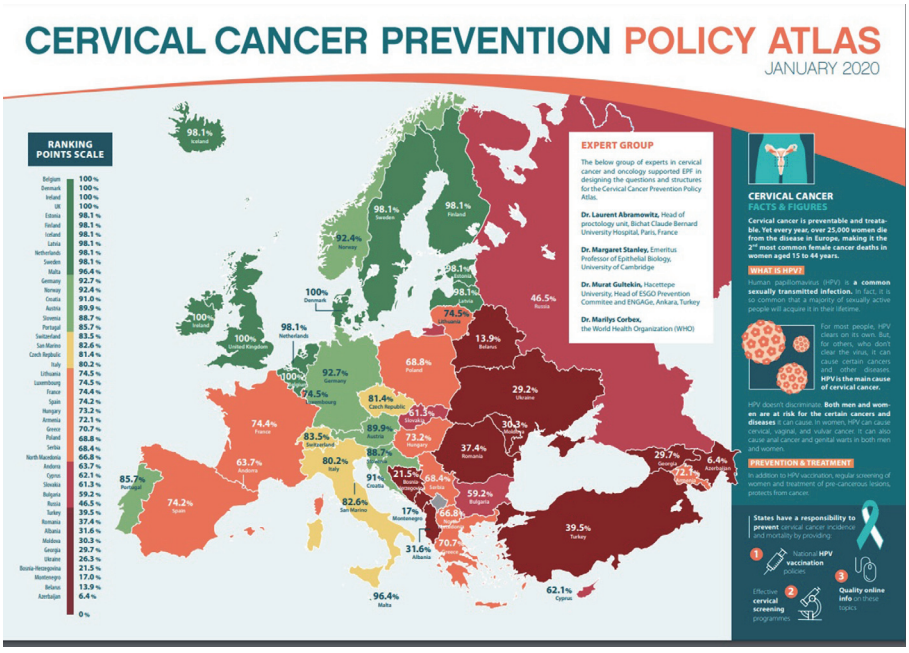
Introduction/Background The HPV Prevention Policy Atlas is a comparative map that scores

46 countries across Europe on prevention policies of cervical cancer. It compares the countries on:

1. Primary prevention of cervical cancer through HPV vaccination
2. Secondary prevention of cervical cancer through screening programs, and
3. Online state information on HPV

It does not reflect the prevalence rate of cervical cancer in the countries. The Atlas aims to serve as a baseline to compare policies on HPV, educate national stakeholders and spark debate with policymakers

Methodology Atlas scores 46 European countries based on 3 headings criteria and 14 sub-criteria using the Analytic Hierarchy Process (AHP). AHP method is about setting a general, overall goal and further breaking it down the headings, criteria and sub-criteria, resembling the 'tree and the branches'.



Abstract #930 Figure 1

Each final 'branch', the smallest sub-criteria has its specific weight and based on the answer will receive a percentage score. Finally the scores for each sub-criteria are added up to the total score of each country.

Results The 2023 HPV Atlas compares the progress with the earlier 2020 edition. The results will be available on 22 June and compared to earlier results:

Belgium, Denmark, Ireland and the UK are the policy champions and lead the Atlas with excellent policies on primary secondary prevention and providing evidence based information to citizens.

Belarus and Azerbaijan score the worse, as there is literally no information about the HPV prevention to be found and policies on primary or secondary prevention are non-existent.

Conclusion The situation in Europe is very unequal. There is a clear divide between northern Europe, Southern Europe and Eastern Europe. While vaccine exists and screenings technologies are available – the access is very dependent on where you live. This leads to high incidence and mortality which could be avoided should proper policies be put in place.

Disclosures https://www.epfweb.org/node/552

02. Diagnostics

#873 DEVELOPMENT OF AN ARTIFICIAL INTELLIGENCE-BASED DIAGNOSTIC SYSTEM FOR THE DETECTION OF ABNORMAL COLPOSCOPIC FINDINGS

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Introduction/Background Colposcopic examination requires sufficient training to detect cervical intraepithelial neoplasia (CIN) with (1) high diagnostic accuracy and (2) minimizing time and reducing tissue biopsies. The aim of this study was to develop an artificial intelligence (AI)-based system that replicates expert colposcopic examination techniques, independent of examiner skill.

Methodology A retrospective analysis was performed using 8341 colposcopic videos from 2013 to 2019, consisting of seven early-stage cervical cancer cases, 203 CIN3 cases, 276 CIN2 cases, and 456 CIN1 cases. An AI-based lesion detection model was developed to identify major abnormal colposcopic findings. The model was trained using the annotated abnormal findings with the highest acetic acid intensity in cervical cancer and CIN3 cases whose histological diagnoses were confirmed. The developed AI model was then applied to CIN1 and CIN2 cases to evaluate the diagnostic accuracy of the lesions.

Results The AI-based model was trained on 60 cases of cervical cancer and CIN3 and validated on 150 cases. The model was able to identify severe lesions with high accuracy, with a sensitivity of 85%, a specificity of 73%, an area under the curve (AUC) of 0.89 for lesion area, and an accuracy of 95% for the number of lesions identified. The model also predicted abnormal colposcopic findings in CIN1 and CIN2 cases with high accuracy for detection of lesion area (sensitivity: 87% and 86%, specificity: 70% and 67%, AUC: 0.81 and 0.81, respectively) and identification of the number of lesions (97% and 93%, respectively). Furthermore, a heat map display based on the prediction results allowed visualization of the area of highest acetic acid intensity corresponding to the actual biopsy locations.

Conclusion We have newly developed an AI-based diagnostic system for colposcopy that can identify CIN lesions with high accuracy and suggest appropriate biopsy sites.

03. Endometrial cancer

#73 NON-STEROIDAL ANTI-INFLAMMATORY MEDICATION USE AND SURVIVAL FOLLOWING AN ENDOMETRIAL CANCER DIAGNOSIS: A POPULATION-BASED NORWEGIAN COHORT STUDY

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Introduction/Background Endometrial cancer (EC) is the most common gynaecological cancer in Norway, with rising incidence. There is a strong need for primary and secondary prevention strategies. While non-steroidal anti-inflammatory drugs (NSAIDs) have been shown to improve survival in other cancers, data in patients with EC is conflicting.

Methodology This population-based, retrospective cohort study linked data from the Cancer Registry of Norway with The Norwegian Prescription database. These registries cover more than 99% of the Norwegian population including all patients in an unselected manner. Patients diagnosed with EC from 2004 – 2018 were included. Biometric data were available from four large health studies for a subgroup of patients. Post-diagnostic exposure to aspirin and non-aspirin NSAIDs was defined as at least three consecutive NSAID prescriptions at least 30 days after the diagnosis of EC. The main outcome measures were overall survival (OS) and endometrial cancer specific survival (CSS). Hazard ratios were calculated with multivariable Cox-regression model.

Abstract #73 Table 1 Characteristics of the study cohort based on NSAID use

Characteristics	Non-exposed (n= 6482)		Aspirin-exposed (n = 685)		Non-aspirin NSAIDs-exposed (n= 620)	
Median age at diagnosis (years)	65.50 (25.50-92.50)		73.34 (37.83-91.92)		64.33 (31.18-85.25)	
	n	*(%)*	*n*	*(%)*	*n*	*(%)*
Clinical stage						
- local	4933	**76.10**	533	**77.81**	442	**71.30**
- regional	523	**8.07**	63	**9.20**	44	**7.10**
- metastatic	618	**9.53**	49	**7.15**	92	**14.84**
- uknown	408	**6.30**	40	**5.84**	42	**6.77**
Tumor histology						
- type 1	5470	**84.39**	575	**83.94**	497	**80.16**
- type 2	675	**10.41**	79	**11.53**	75	**12.10**
- other	337	**5.20**	31	**4.53**	48	**7.74**
Survival status						
- Alive	5285	**81.53**	491	**71.68**	488	**78.71**
- Dead	1197	**18.47**	194	**28.32**	132	**21.29**
- Dead as a result of EC	571	**8.81**	77	**11.24**	81	**13.06**
- Dead as a result of another reason	626	**9.70**	117	**17.08**	51	**8.23**
BMI						
- **< 25kg/m²**	768	**11.85**	60	**8.76**	61	**9.84**
- **≥25kg/m²**	1585	**24.45**	185	**27.00**	169	**27.26**
- **Unknown**	4129	**63.70**	440	**64.23**	390	**62.90**