

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	(%)
<b>Clinical stage</b>						
- 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
- unknown	408	6.30	40	5.84	42	6.77
<b>Tumor histology</b>						
- 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
<b>Survival status</b>						
- 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
<b>BMI</b>						
- < 25kg/m <sup>2</sup>	768	11.85	60	8.76	61	9.84
- ≥25kg/m <sup>2</sup>	1585	24.45	185	27.00	169	27.26
- Unknown	4129	63.70	440	64.23	390	62.90