Challenges in Cervical Screening:
West European Countries with a focus on France

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W-age standardised rate (Cases/100 000 women-years)

- 3.0 to 5.99 (7)
- 6.0 to 8.99 (10)
- 9.0 to 8.99 (6)
- 12.0 to 14.99 (9)
- 15.0 to 17.99 (4)
- 18.0 to 20.99 (2)
- 21.0 to 23.99 (3)

Arbyn, Ann Oncol 2011
Cervical cancer incidence & mortality in the EU (2008) (world-age standardised rates)

Arbyn, Ferlay, Ann Oncol 2011
National cervical cancer policies in EU countries

- Screening interval: 1 to 5 years
- Starting age: 15-30
- Stopping age: 59-70 (or no limit)
- Population coverage main factor of success:
  - Nordic countries, UK, NL (organised): 70-80%
  - Romania (opportunistic): ~10%
  - Several countries: not well known
- Opportunistic screening: overscreening & low coverage in underserved parts of the population
- More Pap smears does not result in lower incidence or mortality
EU guidelines (2)

- Cytology continues to be the standard screening method
- Conventional & LBC are accepted
- First of all: screening should be well organised
  - Reach the target population
  - Monitor quality
  - Register screening/follow-up, link it to the cancer registry
The 2001-14 Bethesda system terminology

• **Negative for intraepithelial lesion or malignancy**

• **Epithelial cell abnormalities**
  o **Squamous cells**
    - Atypical squamous cells (ASC)
    - of undetermined significance (ASC-US)
    - cannot exclude HSIL (ASC-H)
    - Low grade squamous intraepithelial lesion (LSIL) encompassing : HPV/mild dysplasia/CIN 1
    - High grade squamous intraepithelial lesion (HSIL) encompassing : moderate and severe dysplasia, CIS/CIN 2 and CIN 3
    - Squamous cell carcinoma
  
  o **Glandular cells**
    - Atypical glandular cells (AGC) (specify endocervical, endometrial, or not otherwise specified)
    - Atypical glandular cells, favor neoplastic (specify endocervical or not otherwise specified)
    - Endocervical adenocarcinoma in situ (AIS)
    - Adenocarcinoma (endocervical, endometrial, extra-uterine, not otherwise specified)

• **Other**
  - Endometrial cells in a woman ≥45 years of age
Liquid based cytology (LBC) versus conventional

- **Quality of the sample** is improved significantly
- Advantage to perform **ancillary HPV testing** or **molecular markers**
- **Shorter reading** time
- Most cytologists prefer LBC

CP and LBC are both recommended in EU guidelines for cervical cancer screening

The choice results from a **cost-effectiveness evaluation**
COVERAGE BY AGE GROUP  France

http://www.ameli.fr/l-assurance-maladie/statistiques-et-publications
Recommandations 2016 INca for the management of ASC-US and LSIL:

Respective Role

- Colposcopy,
- Repeat Pap smear,
- HPV test
- Dual staining p16/Ki67
ASC-US

HPV Test

Option < 30 ys

p16/ki67

Colposcopy

Pap smear

1 y

2 ys

3 y

4 ys

Pap smear

Colposcopy

Pap smear

Inca 2016
Colposcopy

Cytologic LSIL

Colposcopy

P16/Ki67

Pap smear or HPV test

Inca 2016
Histo LSIL (CIN 1)  

1 y  
- HPV test or Pap smear 
  - HPV - 
  - Pap smear Normal 
    - Pap smear 
  - HPV + or ASC-US-LSIL 
    - Colposcopy 
      - Histo ≤ LSIL(CIN 1) 
        - HPV test or Pap smear 
          - HPV - 
          - Pap smear Normal 
            - Pap smear 
          - Pap smear Normal 
            - HPV test or Pap smear 
              - Histo LSIL(CIN 1) 
                - Treatment or FU 
              - Pap smear 

Inca 2016
Supplements to EU guidelines for quality assurance in cervical cancer screening

Guidelines can be downloaded at:
Primary screening HPV cytological triage: 2016
30% Italy and Start Netherlands 2017

- Test HR HPV
  - Negative
  - Positive
    - Cytology
      - Normal
        - Repeat cyto and/or HR HPV 1 year
          - Normal/ Negative
            - Test HPV 5 years
          - Abnormal/ Positive
            - Repeat cyto or Colposcopy
      - Abnormal

European guidelines for quality assurance in cervical cancer screening 2015
Vaccination and screening multiple variables?

- Countries
- Age of vaccination
- Coverage of the vaccination
### Coverage vaccin anti-HPV (2010-2011)

<table>
<thead>
<tr>
<th>Countries</th>
<th>Age vaccination</th>
<th>Coverage (3 doses)</th>
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<tbody>
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<td>Denmark</td>
<td>12</td>
<td>62%</td>
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<td>Spain</td>
<td>11-14</td>
<td>77%</td>
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<td>France</td>
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<td>24-26%</td>
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<td>Italy</td>
<td>11</td>
<td>56%</td>
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<td>Switzerland</td>
<td>11-19</td>
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*Dorleans et al., 2010; Sabiani et al., 2011; Widgren et al., 2011; CDC, 2011; Limia et al., 2011; Vicari et al., 2011; Hull et al., 2011; Jeannot et al., 2012*
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<th>Country</th>
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DIFFERENT COVERAGE IN SCREENING AND VACCINATION IN EU

2. UK [http://www.hscic.gov.uk/searchcatalogue?productid=12601&q=title%3acervical+screening+programme&sort=Relevance&size=10&page=1#top](http://www.hscic.gov.uk/searchcatalogue?productid=12601&q=title%3acervical+screening+programme&sort=Relevance&size=10&page=1#top)
Future strategy for European countries

• Quicker update of guidelines, more efficient health technology assessment

• Organise it well: screening & vaccination in the most efficient way
  – HPV-vaccination of >90% girls 12-14y at cheap price
  – 3 HPV screenings over life time (30-40-50)
  – 2 HPV tests for vaccinated cohorts