Annual Meeting
Helsinki, Finland

NATIONAL INSTITUTE FOR HEALTH AND WELFARE
Israel’s population

- 7,500,000 by the end of 2010
- Of them:
  - 76% Jews (5,700,000)
  - 20% Arabs (1,500,000)
  - 4% Others (300,000)
Cervical cancer
Invasive tumors

● In 2009
  ♦ ASR*/100,000 in Jews: 5.47
  ♦ ASR*/100,000 in Arabs: 4.41

● Time trends 1991-2009 (19 y)
  ♦ Stable (non-significant increase) in Jews and Arabs

*world standard population
International comparison
(Invasive tumors, 2008, ASR/100,000)
### Relative survival
(invasive tumors only)

<table>
<thead>
<tr>
<th>Dx</th>
<th>% 5y survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-1994</td>
<td>64</td>
</tr>
<tr>
<td>1995-1999</td>
<td>66</td>
</tr>
<tr>
<td>2000-2004</td>
<td>70</td>
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</tbody>
</table>

Lower than in the US and Australia; Similar to some European countries (Finland)
Early detection

- National Health Insurance
  - 100% coverage, 4 HMOs
- Pap smear fully covered for
  - All women aged 35-54 (highest incidence) – 1x3y
  - High-risk groups (?)

- Utilization
  KAP 2008-9: ever a pap smear; 35-54y old women
  - Jews – 63.4%
  - Arabs – 29.6%
Cervical cancer

In-situ (CIN-III) tumors

- In 2009
  - ASR*/100,000 in Jews: 19.42
  - ASR*/100,000 in Arabs: 2.79

- Time trends 1991-2009 (19 y)
  - A significant increase in Jews (+86%) and Arabs (+365%)

*world standard population
Natural progress

CIN1

CIN2

CIN3

Cancer

60% Regression

40% Regression

20%

<1%

5%

48%

22%

30% Regression
Cervical cancer
In-situ vs. invasive tumor trends

Jews
Arab
Jews
Arabs

CIN-III: increasing
Unusual etiology?

Paradox

ASR/10

HPV genotypes
Invasive cervical cancer

- Lancet Oncology 2010 (de Sanjose et al.) – 22,661 samples
  - HPV-DNA positive – 85%
  - Genotypes 16, 18 (in those positive) – 71%
    - SCC – 70%; Adenocarcinoma – 82%
## HPV genotypes in Israel

- Largely unknown
  - Grisaru et al., 2008, pilot study

<table>
<thead>
<tr>
<th>HPV Type</th>
<th>Israel (N=84)</th>
<th>World (N=22,661)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPV-16</td>
<td>41</td>
<td>61</td>
</tr>
<tr>
<td>HPV-18</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>HPV-39</td>
<td>22</td>
<td>2</td>
</tr>
<tr>
<td>HPV-52</td>
<td>19</td>
<td>3</td>
</tr>
</tbody>
</table>
A Dilemma

● In a country with low incidence of invasive cervical cancer
   ♦ But increasing incidence of in-situ cervical cancer
● And where HPV main serotypes (re. cervical cancer) are largely unknown -
   ● Should HPV vaccine be included in the national immunization program?
Decision

• Based on
  ♦ available scientific data
  ♦ And cost-benefit analyses done for Israel
    • a positive value if dose ≤ $99

• In 2012, HPV vaccine will be included in the Israeli national immunization program
  ♦ Girls aged 14y

• Additionally,
  ♦ Re-consideration of the screening program
  ♦ Study of HPV genotypes in Israel