Preventing Cervical Cancer in Ireland
Cervical cancer in Ireland-key statistics

Incidence
9th most frequently diagnosed cancer in women (270)

Mortality
12th most common cause of cancer death in women (103)

Trends
Mortality has been increasing since 1978

Comparison to other countries
Ireland relatively more cancers

46 years
The average age at diagnosis

56 years
The average age of death
Cervical cancer rates

2012

European Comparison

- Ireland had the same cervical cancer incidence rate as Poland
- Higher incidence than most of western Europe
Infection is very common
Most women are infected within 18 months of becoming sexually active

Only a minority of infections persist
This is a necessary step in the development of precancer and cancer
Strategies aimed at preventing deaths from cervical cancer

**Primary prevention**
Vaccination against the HPV virus

**Secondary protection**
Screening for precancerous changes of the cervix

**Early detection**
Prompt assessment and referral for women who have symptoms
Cervical cancer control in Ireland – 2008-2017

- **2008**: CervicalCheck starts
  National Screening Programme.
- **2009**: HPV vaccination
  For secondary school first years.
- **2010**: Death of Jade Goody
  Unprecedented levels of screening
- **2011**: HPV vaccination
  Catch up 18 year olds.
- **2012**: HPV testing post treatment
  At colposcopy.
- **2013**: HPV testing for uncertainty
  Colposcopy follow up
- **2014**: HPV triage of LSIL
  and ASCUS
  Expansion of colposcopy.
- **2015**: HIQA HTA
  HPV as primary screen
- **2016**: Next steps?

25/05/2017
Cervical cancer is preceded by precancerous condition called CIN.
CIN does not have symptoms and can be present for ten to fifteen years before it turns into cancer.
Smear tests take scrapings of cells from the cervix which the pathologist can categorise as normal or not according to the size of the cell’s nucleus.
Cervical screening programmes aim to

01. Detect and treat precancerous abnormalities

02. Reduce the chance of developing cervical cancer.
Cervical Screening Programmes

Organised cervical screening programmes reduce the incidence and mortality from cervical cancer

Ingredients for success

- Coverage
- Organisation
- Quality Assurance

Population register
Maintaining the register and keeping it up to date

The test
Taking the tests, tracking and analysing

Diagnosis and treatment
Colposcopy and histology.
Define the population of women to be screened?

Not women >60
- Anatomical Changes
- Prevalance of high grade CIN is low
- Cytology performs poorly

Not Below 25
- Incidence of cancer is low
- Prevalance of transient changes relatively high
- Screening not protective

Exceptions – colposcopy, post transplant, dialysis and HIV
More than 80% of the population (1.1 million women) should be up to date with their cervical screening
CervicalCheck - Screening Promotion

Research
- Interventions that influence behaviour change

Communication
- Screening promotion messages

Change behavior
- Making screening easy and popular

Target
- Populations/areas of low uptake
Improving screening — helping women to remember

Information service
• Freephone 1800 45 45 55
• Freepost
• Email info@cervicalcheck.ie
• Website www.cervicalcheck.ie
CervicalCheck Coverage

Geographical

Age groups

Percentage of eligible women who had a smear test between 1st April 2012 and 31st March 2017

Current Coverage – 79.7%
Five year coverage – trends since 2014
Smear takers / Healthcare professionals

5000 smeartakers contracted to CervicalCheck accessible via website

Training programme for nurses and gp trainees

CME for registered smeartakers

On line training resource

41% of women first heard of the programme from health care professional
The test - cytology
Outsourcing Irish Labs

Challenges
- Bethesda terminology
- Geographical challenge for MDT
- Disruption of training in Cytology

Irish Labs
- 2013 – repatriation of half of the cytology testing to Ireland to two laboratories
Cytology

Normal
Most results show no abnormality

High grade
These abnormalities need further investigation

Low grade
Some of these abnormalities will need further investigation

<table>
<thead>
<tr>
<th>Cytology results</th>
<th>N</th>
<th>%</th>
</tr>
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</table>
| NAD (no abnormality detected)                         | 260,748| 90.06%
| Low Grade                                             |        |      |
| ASCUS                                                 | 11,582 | 4.00%
| AGC (borderline glandular)                            | 366    | 0.13%
| LSIL                                                  | 11,806 | 4.08%
| High Grade                                            |        |      |
| ASC-H                                                 | 1,290  | 0.45%
| HSIL (moderate)                                       | 1,813  | 0.63%
| HSIL (severe)                                         | 1,780  | 0.61%
| Query invasive squamous carcinoma                     | 39     | 0.01%
| AGC favour neoplasia                                  | 54     | 0.02%
| Query glandular neoplasia / (AIS) / adenocarcinoma    | 49     | 0.02%
| Total                                                 | 289,527| 100.00%
Advantage of HPV testing as a second line or triage test

- Reduce default and repeat smears
- Recognise CIN II-III early
- Early treatment of abnormal changes
- Identify women without CIN
The first year of HPV triage

Data
Information on this new strategy was collated from the twelve months from June 2015 to 2016.

The Women
9190 women with HPV 16/18 positive and a low grade cytological abnormality.

The Cytology
3574 women (39%) had ASCUS and 5616 (61%) had LSIL

ASCUS
LSIL
The first year of triage - histology

01 A biopsy result is available for 7017 women. This included a diagnostic punch biopsy in 6871 (98%) women and a LLETZ in 136 women (2%).

02 Four cases of adenocarcinoma in situ were identified and one woman had a microinvasive cancer.

Biopsies

- No CIN
- CIN1
- CIN2/3
- AIS
- Cancer

Biopsies
HPV testing and CervicalCheck

- Post Treatment 2012
- Management of Uncertainty 2014
- Triage of low grade smears 2015
- Primary testing – HIQA report awaited
Cervical Screening – reality check

- Screening aims to detect asymptomatic disease
- Screening doesn’t always prevent cancer
- Screening tests are not 100% accurate; abnormalities may be missed or wrongly identified.
- The false-negative rate of smears was found to be 18 percent in a New Zealand audit (2004)
Predictive value of cytology versus HPV testing

Cytology – problems with sensitivity – Needs to be repeated at regular intervals

HPV testing improves the CIN3 negative prediction

Challenge – how to manage HPV positive women

Dillner BMJ 2008
Primary HPV testing

- HPV testing more sensitive
- Especially in women over 30
- HPV vaccinated cohort is now aged 23 years.
- HTA due to be published by HIQA in 2017
Relative risk HPV, CIN and cancer

Schiffman, Wentzensen et
Diagnosis and treatment for women - quality assured colposcopy
Diagnosis – a balanced view

01 • Low grade CIN - the majority will resolve - Emphasis is on reassurance and follow up

02 • High grade CIN – Likely to persist and some will develop cancer
  • Emphasis is on treatment
Treatment of CIN reduces the risk of cervical cancer by 90% Most are done in OPD under local anaesthetic

Follow up
After treatment – women are still at risk and need close follow up
Long term considerations – effect of Excision on Pregnancy

Meta-analysis suggested increased risk of preterm delivery and midtrimester miscarriage.

Related to the depth of excision.

More common if multiple treatment.

Recent evidence – depth of excision less than 1 cm no increased risk.
In 2007 – 7000 new patient appointment opportunities

2008- new patient capacity increased to 16,500

2015 – capacity increased to 19,500 to accommodate HPV triage of low grade abnormalities
CervicalCheck growth in annual new patient attendances

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of first visits</th>
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<td>Year 1</td>
<td>10,094</td>
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<td>16,811</td>
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Improving access to colposcopy – reducing waiting times

- **Target**

![Graph showing waiting times over years]

- **Year 1**
  - All women referred to colposcopy should be offered an appointment within 8 weeks

- **Year 2**
  - All women referred to colposcopy with a smear suggestive of CIN 2 or CIN 3 should be offered an appointment within 4 weeks

- **Year 3**
  - All women referred to colposcopy with a suspicion of invasive cancer should be offered an appointment within 2 weeks
Improving access to colposcopy – Impact on follow up attendances

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<tr>
<td>Year 1</td>
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Improving Diagnosis – Biopsy Rate – Year eight results

It is good practice to perform a biopsy in the presence of an atypical Transformation Zone to confirm the diagnosis. Target >90%

The biopsy should be suitable for analysis more than 95% of the time

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CervicalCheck - Detection of high grade abnormalities – the first seven years
Achievements to date

1,000,000 +
Number of women screened. Five year coverage is now 79.5%

50,000 +
Number of women have been treated for high grade precancer

1,200 +
Number of cancers detected.
Numbers of cervical cancers according to age

Carcinoma in Situ (CIN3/AIS) according to age
Cervical cancer rates

Figures to 2014

NCRI, 2017

Incidence dropped by 7% between 2010 and 2014

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Cervical cancer rates

Figures to 2014

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![Graph showing cervical carcinoma rates with data points and trend line]

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Trends in presentation of Cervical Cancer in Ireland according to age group
The future why high uptake of HPV vaccination is important to CervicalCheck

- Vaccination prevents against glandular cancers
- Reduce need for treatment which can effect pregnancy outcome
- Allow us to use smarter screening tools
Acknowledgements