Reviewer's report


Version: 1 Date: 1 February 2015

Reviewer: Marc Arbyn

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GENERAL COMMENTS
The authors present a careful trend analysis of cervical cancer mortality after correction of the well-known certification for uterus-NOS (not otherwise specified). The correction of this certification might not be optimal by using age-specific proportions (cervix/corpus) from the Netherlands. However, the authors are aware of this and explain this in the discussion. Changes in trends are explained mainly as a consequence of exposure to HPV and screening. The authors make justified recommendations regarding future organised screening with use of HPV instead of cytology screening.

A major problem is the error in the definition of ICD codes (explained below). These may be simple typing errors. If not, re-computation of corrected rates may be required.

SPECIFIC COMMENTS
Title
“Drop” of “decrease” would be better than “descent”

ABSTRACT

BACKGROUND
Line 59-61. According to Arbyn Ann Oncol 2012, cervical cancer is the third most frequent female cancer and the fourth most frequent cause of death. This more recent ref can replace ref 4.

Line 62: change efficacy by effectiveness.

MATERIALS AND METHODS
There are errors in definition of the death causes.

Cervix cancer:
ICD-9: 179 is not cervix but uterus-NOS (not otherwise specified). The code for cervix in ICD-9 for cervix cancer is 180.

Uterus-NOS:
ICD-7: 173 is not uterus-NOS but uterus-other (a category for rare cancers such as chorioblastoma) which can be omitted from the analysis. Inclusion or exclusion of this category will not have consequences for the analysis.

ICD-9: 182 is the code for corpus uteri cancer and not for uterus-NOS cancer. The code for uterus-NOS is 170 in ICD-9.

The authors can consult Ref 13 (Eur J Cancer 2009), for icd definitions.

Line 118
The joinpoint programme is not from SEER but NCI.

Line 120.
“useful” would be a better adjective than “valid”.

The fact that ACP models can only identify changes on top of linear trends but cannot attribute the linear drift to cohort or period (non-identifyability problem) could be explained better (see Arbyn Arch Publ Health 2000).

RESULTS
It is recommended in the text to mention “-“ when the trend is decreasing. For instance line 152: since 1995 around 2.6% per annum (95%CI: -3.6; -1.7). Put “-“ before 2.6%.

Line 172: identify “post-war years”

Line 176.
The instability for youngest cohorts is mainly due to small numbers.

Line 190

DISCUSSION
Line 191
Arbitrariness. “Possible non-representativity” is a better term.

Line 206
“Gynaecological revisions”. “Cytological screening” is a better term.

Lines 205-7. A reference should be added demonstrating that women at higher risk tend to be better screened.

Line 214.
.. to further reduce the rates. “To compensate increased exposure to HPV” may
be a better expression.

Line 279

Better references (see ref 30) describing evidence regarding primary HPV-based screening are:


Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

'I declare that I have no competing interests'