QUALITY CHECKS AFTER AUTOMATED CANCER CODING

Minna Merikivi[1], Niko Lavonen[1], Nea Malila[1]
[1]Finnish Cancer Registry, Helsinki, Finland

BACKGROUND

Finnish Cancer Registry made the first computer program for automated prostate cancer coding in the new cancer register database in January 2018. Our aim was to find out, if unexpected errors happen in the automated coding.

MATERIAL

As material were all new notifications in Cancer Registry database in January 2018, mainly from year 2016.

METHODS

The program included separated processes. It identified (IDC-10 or SNOMED identification) and marked irrelevant notifications, created new pre-cancer and invasive prostate cancer cases and updated earlier coded prostate cases. Notifications with no evidence of malignancy, ICD-10 D29., or pathology report with benign morphology, (1570 persons) were considered as irrelevant in terms of prostate cancer. Notifications with ICD10 code D07.5 or a pathology report with morphology code M8140/2 or M8148/2 (260 persons) were considered as pre-cancer cases. Notifications with ICD10 code C61.9 or a pathology report with morphology M8140/3 (4942 persons) were considered as invasive cases.

RESULTS

Altogether 5519 persons with one or more new notifications were handled. 3676 new pre-cancer or invasive cases were created and 1843 persons with earlier coded cases were updated.

- Some unexpected errors in the automated coding of time of diagnosis or in method of confirmation were found. In ten cases, the time of autopsy were used as diagnosis date, which leads a conflicting time of diagnosis and date of death.
- Some pathology notifications had recorded autopsy as histological specimen, not an autopsy, and this error is impossible to trace.
- Creating a duplicate of a case was expected if a person had earlier unknown cancer (C80.9): three out of 11 cases were corrected.
- Errors in stage of cancer were expected. In all, 823 cases were manually checked because of conflicting TNM-value with earlier staged case, were leading to 34 cases to be corrected. Some notifications were filled with patients' current TNM-values. We also checked every case, where TNM was updated and the latency from time of diagnosis to submitting the notification was more than two years. Only few cases needed correcting.
- Pathology notifications, which were marked as non-cancers were checked and no errors were found.

CONCLUSIONS

Only 0,9% of all automatically coded prostate cancer cases included errors.
We could identify some of those errors beforehand and some were discovered in the manual check after automated coding.
Finding and correcting the cases with errors was a quick process.
Co-operation between cancer coders and system specialists is required.

Contact information:
Minna Merikivi
minna.merikivi@cancer.fi
Finnish Cancer Registry
Unioninkatu 22, 00130 Helsinki, Finland