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A claims-based algorithm to identify cancers in the French retired self-employed craftspeople cohort study : ESPrI

BACKGROUND

- Reimbursement individual data are available from the French retired self-employed craftspeople cohort study since 2009.
- Long-term objective is to quantify the risk of cancer among cancerigen occupational exposed *versus* non exposed retired self-employed craftspeople.

OBJECTIVE

- To develop an algorithm to identify retirees with an incident cancer only based on French medico-administrative databases (FMAD) in a passive individual epidemiologic follow-up.

METHOD

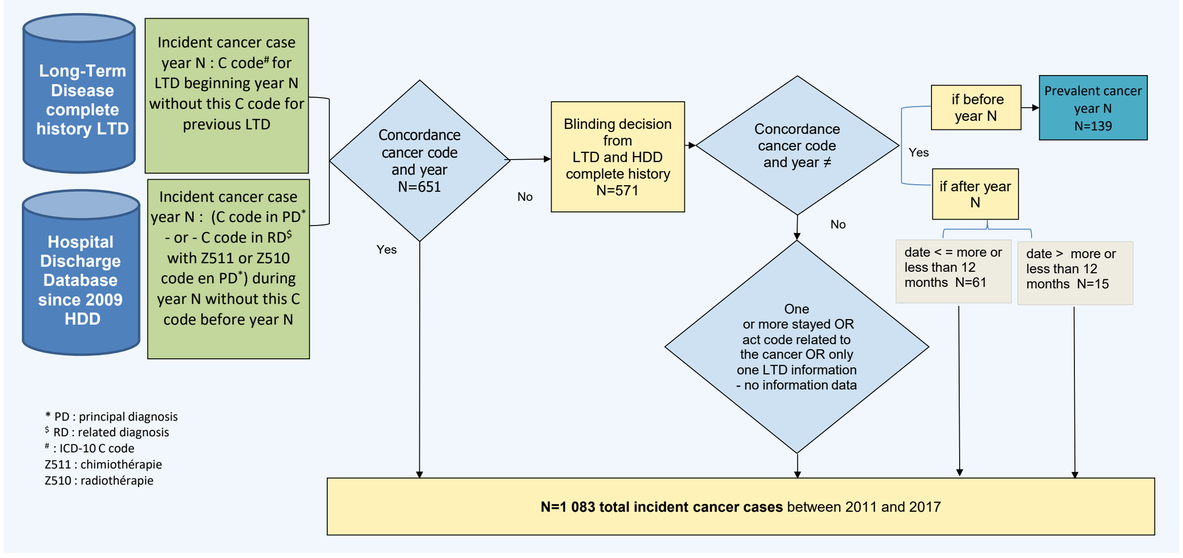
- Among 9 090 participants, healthcare data from 7 544 ESPrI retirees, who did not refuse individual data analysis, were annually extracted from the French national health insurance cross-fund information system (Sniiram), including Hospital discharge database (HDD) since 2009 and complete Long-term Diseases (LTD) history.
- Generic algorithm process and results are described in Figure 1.

RESULTS

- Among 7 544 ESPrI retirees, matching through medical records, 1 083 incident cancers from potential asbestos-related and more frequent localizations* were identified between 2011 and 2017, 1 004 in men and 79 in women.
- 60% were identified through LTD and HDD, 40% were classified after individual blinding decision.

* : Lip-oral cavity-pharynx (C00-C14), Œsophagus (C15), Rectosgimoïde Colon (C18, C19), Rectum-Anus (C20, C21), Liver (C22), Pancreas (C25), Larynx (C32), Trachea (C33), Lung (C34), Mesothelioma (C45), Pleura (C384), Breast (C50), Ovary (C56), Prostate (C61), Kidney (C64), Bladder (C67).

Figure 1 | Algorithm to identify cancers cases using Hospital Discharge Database (HDD) and complete Long-Term Diseases (LTD) history in the ESPrI cohort



DISCUSSION - CONCLUSION

- Individual passive epidemiologic follow-up by using FMAD is feasible and offered the advantage of reducing the risk of attrition and decreasing the total cohort cost.
- Still in course, before extending to others French cancer registries, first results of the performance ESPrI algorithm's evaluation study in collaboration with the cancer registry of Gironde were reassuring with a good global sensitivity 96% and positive predictive value 79%.

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