

Linking the Diagnostic Imaging Dataset (DID) to cancer registration data - improving understanding of diagnostic imaging in lung and ovarian cancer

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Objectives

To link the Diagnostic Imaging Dataset (DID) to cancer registration records to allow investigation of imaging performed in patients diagnosed with cancer and its relation to patient pathways and outcomes for lung and ovarian cancer patients diagnosed in England in 2013.

Approach

All available DID data from April 2012 until July 2015 were joined with registry data for all patients diagnosed with lung cancer in 2013, extracted from Public Health England's tumour-level cancer records. Records were joined on NHS number and date of birth for individuals aged 15-99, with a non-provisional tumour record and with only one lung cancer diagnosis.

One tumour can be linked to many imaging records. Because DID data are not limited to cancer-associated imaging, variables were created to flag imaging records that are likely to be related to the lung cancer diagnosis.

Lists of imaging procedure (SNOMED) codes considered to be related to the cancer diagnosis were created in consultation with clinicians. Imaging records that took place in the 3 months prior to diagnosis and were on the list of relevant procedure codes were flagged as relevant records.

The same method was replicated for ovarian cancer.

Results

34,780 patients, each with only one lung tumour diagnosed in 2013, were joined with 502,600 DID records. The aforementioned flagging procedure resulted in 52,429 relevant DID records.

5,911 patients, each with only one ovarian tumour diagnosed in 2013, were joined with 74,425 DID records. The aforementioned flagging procedure resulted in 3,830 relevant DID records.

The resulting linkage has highlighted issues with potential missing imaging data and this is being explored and will be reported upon.

Conclusion

This is the first time linkage of DID and cancer registration data has taken place. The newly linked dataset will enable researchers to explore the imaging dataset further, with the potential to deepen understanding of issues such as imaging usage and intervals in imaging delivery.

Funding sources

Cancer Research UK

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