



Trust First Seen algorithm for NLCA 2018

Patients in the NLCA analysis are cohorted according to the trust/organisation first seen, since this is the best current indicator of the decision-making MDT. In England the **COSD 'Organisation Site Code (Provider First Seen)'** can be used to cohort patients, but problems arise when this is not completed, or when different providers in a complex pathway record different results.

The most recently updated value for COSD 'Organisation Site Code (Provider First Seen)' will be used for trust allocation if it has been provided (see step 1 in the algorithm). If not, the remaining steps of the algorithm described below will be used.

The NLCA Trust First Seen algorithm aims to allow allocation of all patients by using all the data available to the NCRAS team, prioritising trusts that are non-surgical and non-tertiary. Combinations of earliest dates, highest frequency of trusts appearing in those fields and priority order in types of trusts have been used. The trust where the relevant CT scan is carried out is given priority and non-NHS hospitals and primary care are only considered if no NHS trust appears in any field.

The fields used in the algorithm:

- COSD Organisation Site Code (Provider First Seen)
- COSD Organisation Site Code (Provider First Cancer Specialist)
- COSD Site Code (of Imaging)
- COSD Hospital Site Code of MDT Meeting
- NCRAS first event (a field derived within the cancer registry for the trust of the first event in the pathway)
- NCRAS trust of diagnosis (a field derived within the cancer registry that uses data about the diagnostic pathway)
- NCRAS first surgery (a field derived within the cancer registry for the trust of the first surgery)
- NCRAS trust first seen (a field derived within the cancer registry using a similar algorithm to this one, but using multiple extra data fields)
- NCRAS diagnosing trust (a field derived within the cancer registry using a similar algorithm to this one, but using multiple extra data fields)
- COSD Provider First Seen (field taken from the most recently updated records received by NCRAS)—added August 2018

For the first four of these, the provider code relating to the first recorded date (of that type of event) is selected. Each trust code is connected to the NCRAS TRUST table to select the current code of the trust concerned. The frequency of each trust across the first nine fields is calculated for each tumour.

Any value found in the tenth (last) field will automatically over-ride any other trust value.

Algorithm steps:

1. Ascertain whether a 'most recently updated' COSD Provider first seen value exists. If not calculate trust first seen from the next steps.

2. Exclude any trust with a date more than 6 months before diagnosis date, or any with no associated date.
3. Rank trust codes so that any beginning with 'R' come before any that don't (NHS trusts vs any other health care provider), and tertiary trusts are ranked below other NHS trusts.
4. Order all the event dates associated with the nine trust fields and choose the earliest date.
5. Order trusts on that earliest date as follows:
 - i. CT scan – unless at a tertiary trust *(see note below)
 - ii. Secondary care
 - iii. Specialist care
 - iv. Tertiary care
 - v. Private care
 - vi. Any other provider
6. If there is more than one trust returned, use most frequently reported non-tertiary trust.

Note: a case is only allocated to a tertiary centre if there are no other NHS trusts in the patient pathway.

If you have any queries on the algorithm or validation exercise, please contact your NCRAS Data Improvement Lead or the NLCA team (NLCA@rcplondon.ac.uk).