



Completeness of the national Systemic Anti-Cancer Therapy data set compared with the Cancer Waiting Times data set

National Cancer Registration and Analysis Service Data Briefing

Background

The national collection of detailed cancer chemotherapy information in the NHS in England commenced in April 2012. The Systemic Anti-Cancer Therapy (SACT) information standard applies to all organisations providing systemic anti-cancer therapy services, including chemotherapy, in or funded by the NHS in England. It relates to all cancer patients, both adult and paediatric, in acute inpatient, day-case and outpatient settings and delivery in the community. It covers SACT treatment for all solid and haematological malignancies, including patients in clinical trials.

The implementation phase finished in April 2014, and by July 2014, every NHS hospital trust providing SACT services in England had submitted data. During two years of data collection the completeness of the SACT data set has greatly improved, however, some gaps remain in what has been reported. This briefing identifies such gaps and allows PHE to work with hospitals collecting and submitting data to improve completeness.

Matching SACT to Cancer Waiting Times data – 2014

Within the English national cancer registration system, information about patients receiving chemotherapy is collected in several data sets including Cancer Waiting Times (CWT) data¹. The CWT data set records chemotherapy as a selection of treatment categories along with treatment start date. This data set is useful for comparisons to SACT as it has well-established routine data collection processes and is used for reporting official national statistics². Data on cancer waiting times is available in a timely manner that aligns with the data submission timescales for SACT. Some patients who were treated with systemic anti-cancer therapies may

Key messages

Every NHS hospital trust providing chemotherapy services in England submits data to the SACT data set.

Compared to other routine data sources we estimate that around 88% of patients reported to have received chemotherapy during 2014 were included.

Variation in SACT completeness by NHS provider trust should motivate further improvements in the collection of treatment data.

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currently be captured by only one of either SACT or CWT datasets. The purpose of this briefing is to incentivise improvements in the coverage of SACT data in particular.

We linked the two data sets using the NHS number to identify individual patients who were present in 2014 CWT data and had more detailed treatment information recorded in the SACT data set. We noted that some patients had a different primary diagnosis reported across the two data sets, but in general there was a good match between the broader cancer types that patients were assigned to, such as breast or lung cancer. Cancer types were assigned using the International Classification of Diseases, 10th Edition (ICD10), coding system used by both data sets.

Results

Focusing on cytotoxic chemotherapy and other drug treatments (such as immunotherapy or targeted therapies), and excluding endocrine treatments, we found that 88% of patients reported to have received SACT in 2014 within CWT were included in the SACT dataset. Around 13,000 patients were missing from the SACT data set, which equates to 12% of all patients reported through CWT. This ranged from 6% of patients with breast cancer to 27% of patients with leukaemia (figure 1).

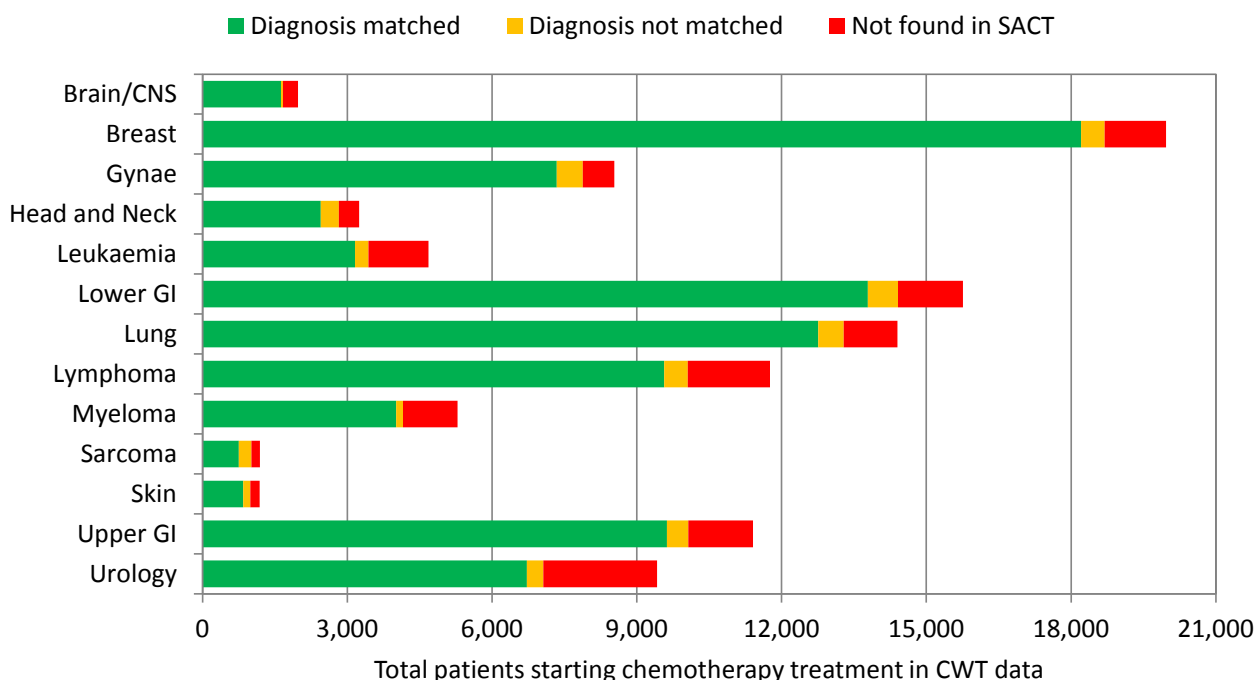


Figure 1: results of record matching between cancer waiting times and SACT data sets (excluding endocrine treatments). Cancer types are assigned based on CWT data.

We also calculated estimates of ascertainment for each NHS hospital trust providing chemotherapy. This was summarised by assessing the proportion of patients reported in each cancer type (figure 2) showing marked variation.

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In addition to calculating the proportion of patients matched across CWT and SACT, we assigned trusts into one of four categories for each cancer type that they were expected to report activity on:

- trusts where all the patients reported in CWT were matched in SACT were assigned to the '100% complete' group
- trusts where at least 90% of the patients reported in CWT were matched in SACT were assigned to the '90% complete' group
- trusts where fewer than 90% of the patients reported in CWT were matched in SACT were assigned to the 'Incomplete' group
- trusts where none of the patients reported in CWT were matched in SACT were assigned to the 'missing' group

In total there were 65 out of 144 trusts where at least 90% of the expected patients reported through CWT were also reported through SACT. In contrast, we identified 52 trusts where all of the patients within at least one cancer type reported through CWT were missing SACT data. For example, 10 out of 128 trusts did not report any SACT data for patients with breast cancer receiving systemic anti-cancer therapies, despite reporting them through CWT. The overall completeness of SACT reporting by trust, as compared to CWT data, ranged from 38% to 100%, with an average of 88%. Detailed results broken down by trust and cancer type are provided in Appendix A.

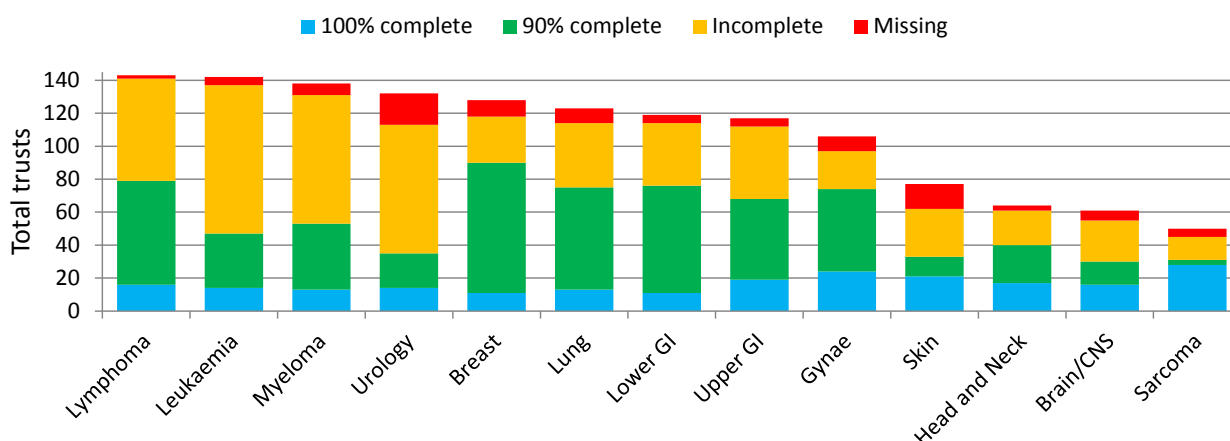


Figure 2: proportion of chemotherapy reported by English NHS hospital trusts through SACT data, by cancer type. Cancer types are assigned based on CWT data

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Endocrine treatments

Endocrine treatments are key treatment modalities for many patients with breast or prostate cancer. Within the CWT data set, we identified around 16,000 patients with breast cancer starting endocrine therapies in 2014 compared to around 18,000 patients starting other systemic anti-cancer therapy. Around 2,000 patients with breast cancer started both endocrine and systemic anti-cancer therapy treatments within 2014.

Within the SACT data set, endocrine treatments were observed to be severely under-reported for patients with breast or prostate cancer. More than 80% of these treatments that had been reported through CWT were missing in the SACT data set.

These treatments are within scope of the SACT data standard, but a possible reason for under-reporting may be due to these treatments being prescribed by hospital teams initially, with care then transferring to GPs. The data collection remit for SACT does not currently extend to primary care.

Summary

Matching against the Cancer Waiting Times data set provides assurance as to the completeness of the Systemic Anti-Cancer Therapy data set, in agreement with broader comparison work undertaken³.

Significant work is needed to address the shortfall in endocrine therapies missing in SACT to provide a more accurate reflection of this activity. PHE data liaison staff will support hospitals with these and other data collection issues.

Recommendations

As detailed in NHS England Commissioning Intentions 2015/16 for Prescribed Specialised Services⁴, trusts are expected to audit activity data quarterly and demonstrate that more than 90% of activity data maps to the SACT data submitted per month. The analyses provided in this report demonstrate the feasibility of using CWT data for this purpose and provide a benchmark for future improvements which can be monitored. Trusts are encouraged to improve data collection where specific under-reporting has been identified.

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References

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2. NHS England Cancer Waiting Times statistics
www.england.nhs.uk/statistics/statistical-work-areas/cancer-waiting-times
3. “Comparing the multiple sources of cancer treatment data”, S. McPhail et al., Cancer Outcomes Conference 2015. Belfast 8-10 June
www.qub.ac.uk/sites/NCIN2015/FileStore/Filetoupload_509468,en.pdf
4. NHS England Commissioning Intentions 2015/16 for Prescribed Specialised Services
www.england.nhs.uk/wp-content/uploads/2014/10/comms-intents-2015-16.pdf

FIND OUT MORE:

These data are available from:

<http://www.chemodataset.nhs.uk/reports/>

Other useful resources:

What cancer statistics are available and where can I find them?

www.ncin.org.uk/publications/reports/

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