Recording Recurrence, Progression and Transformation Episodes

Contents

Aim

To provide recommendations for the standardised collection of data on cancer Recurrence, Progression and Transformation by population-based cancer registries (PBCR).

Background

Interest in the documentation of cancer Recurrences, Progression and Transformation (RPT) has been driven by a need to improve knowledge and outcomes for patients as the range of therapies increase and survival times continue to improve.

The identification of cancer RPT will deliver important knowledge to:

- Identify the RPT burden on cancer services and patients.
- Improve patient pathway structures post diagnosis and delivery of best care for patients.
- Facilitate research – for example linkage of data to biobank archived samples which could improve knowledge of specific cancer mutations at diagnosis/RPT and help discover better diagnostic methods and treatments.
- Facilitate RPT free survival analysis which when linked with treatment data can provide insights to improve patient outcomes.

Prior to the publication of these recommendations there were no standardised guidance for European Registries on the recording of RPT events. However, there have been requests to cancer registries for these data with some registries already making progress on this issue.

Entering into force

It is recommended that the recording of RPT events (irrespective of date of the primary cancer diagnosis) should be introduced at the earliest opportunity at the start of a registration year and by 2025 at the latest.

It is noted that not all cancer registries will have resources to record RPT events for all tumour sites; if that is the case, we recommend as a start that they pilot this guidance on key sites of local interest.

Definitions

Separate guidance has been developed for haematological and malignant solid cancers (behaviour code 3) at diagnosis.

The following exceptions apply:

Concerning urothelial tumours and central nervous system tumours the behaviour of the first diagnosed incident lesion is irrelevant, therefore this guidance covers all behaviours of these sites. Please refer to the applicable ENCR recommendations. ENCR Recommendation_UT_Jun2022_EN.pdf and ENCR Recommendation Basis of Diagnosis

Cancer Recurrence - the return of cancer after a disease-free period post tumour-reductive treatment where the cancer had a complete clinical or microscopic response to treatment.

Cancer Progression an increase to disease load as assessed post tumour-reductive treatment where a verified complete response was not achieved.

Cancer progression `can happen **in two ways:**

- A patient can have a post-treatment decrease to their tumour load whereby there is macroscopic/microscopic disease present, but the overall tumour size is smaller on imaging/pathology. However, after a period where the disease remains stable, there is an increase to the tumour/disease load.
- Despite tumour-reductive treatments delivered the patient has no response and the treatment result is that the tumour load is bigger than when treatment commenced. Or the patient has a mixed response whereby for example the tumour reduces in size, but the affected nodes/metastasis increase in size/number.

Transformation is the diagnosis of a more aggressive morphology following a more indolent disease.

Disease Episode: Term to cover Recurrence, Progression, Transformation events.

Tumour-reductive treatment: A form of therapy given to a patient with the intention to reduce the tumour load e.g. surgical removal of tumour, systemic therapy targeting the tumour (including monoclonal antibodies), chemotherapy, radiotherapy, immunotherapy, hormone therapy, other or unspecified systemic therapy and stem cell transplantation.

It should be noted that the following are **not** considered tumour reductive therapy for the processes of recording RPT in population-based cancer registries:

- Ongoing hormone therapy after initial treatment for example in breast cancer patients (regarded as maintenance treatment)
- Active surveillance in, for example prostate cancer, thyroid or ovarian cancer monitoring.

Date of recurrence, progression, or transformation: This is defined as the first date in medical records/pathology where the RPT was diagnosed irrespective of the type of diagnostic procedure utilised.

Basis of episode gives an indication of the validity of the diagnosis. This uses the same hierarchy as the ENCR Basis of Diagnosis recommendations. The highest basis should be used, and this may not necessarily correspond to the diagnostic procedure that was used to identify the date of RPT.

Histology of a recurred malignancy following microscopic examination is generally accepted as the most accurate method of cancer recurrence diagnosis. Recurrence can also be validated by other means such as radiologically, biochemically and/or clinically. Exceptions to the ENCR definitions for the coding of basis of cancer incidence (V2-2022) are the following:

"Death certificate only" alone cannot be used as a basis for cancer recurrence

As for incident tumour, "Specific Tumour Markers" cannot be used alone as a basis for cancer recurrence. They must be used in conjunction with an appropriate clinical opinion, radiology or pathology. **Example**: A rise in PSA may be considered as recurrence or progression in prostate cancer if combined with clinical opinion, radiology or pathology.

The "Unknown" basis cannot be used for cancer RPT registration. If a suspected RTP has an "unknown" basis, then a RTP event must not be entered on the patient's cancer registration record.

Disease Episode Location of recurrence and progression for solid tumours only:

- Local: This is the immediate area surrounding the primary tumour determined by the T-Category of the most recent recommended ENCR staging guidelines.
- Regional. This is determined by the regional lymph node classification identified as the N-Category of the most recent recommended ENCR staging guidelines.
- Distant This is determined by the M-category of the most recent recommended ENCR staging guidelines.

Table 1. Data items for collection of recurrence, progression, and transformation by Cancer Registries

It is noted that in the first instance cancer registries will not be able to collect all cancer RPT data. Thus, a Tier system has been introduced for cancer registries to able them to contribute events where data are more limited. The minimum dataset is determined by Tier 1 with Tier 2 adding additional detail where possible.

For each treatment

Data Category	Variables	Tier Allocation
Treatment Intention of primary tumour	Tumour-reductive/ non- reductive treatment or therapy/ Not Known – see table 2 for definitions	Tier1
Treatment Response of primary tumour	Complete Response/Complete Remission. Decrease to Tumour load/Partial Response Increase to tumour Load/Progressive disease. Stable disease Not Known	Tier2
Data items for each recurrence/progression/transformation		
Disease Episode Type	Recurrence/Progression/Transformation	Tier 1
Date of Disease Episode	dd/mm/yyyy	Tier 1
Morphology Code of Episode	____/3 ICD-O-3	Tier 1 for Haematological Malignancies Tier 2 for all other malignancies.
Disease Episode Location	Local (Yes/No) Regional (Yes/No) Distant (Yes/No)	Tier 1 (Solid tumours Only)

	If Distant =yes, record all locations of metastasis using the organ code (first three digits) of ICD-O-3 coding	Tier 2 (Solid tumours Only)
Tumour Grade of Episode	Differentiation grade, WHO grade,	Tier 1 for Haematological Malignancies Tier 2 for all other malignancies.
rTNM (recurrence TNM)	Stage of Cancer as per latest ENCR recommended staging guidelines. rT rN rM	Tier 2 (Solid tumours only)
Basis of Episode	As per Table 1 and Table 2 of ENCR Basis of Diagnosis Recommendations	Tier 1

Table 2. Definitions of Key Data Variables for Recurrence, Progression and Transformation

Data Category	Associated Definition
Tumour reductive treatment	A form of therapy given to a patient with the intention to reduce the tumour load e.g. surgical removal of tumour, systemic therapy targeting the tumour (including monoclonal antibodies), chemotherapy, radiotherapy, immunotherapy, hormone therapy, other or unspecified systemic therapy and stem cell transplantation. Note hormone therapy used as adjuvant maintenance therapy e.g. long-term in breast cancer is NOT included as tumour-reductive treatment.
Disease Episode Type	Term to cover recurrence/progression/transformation events.
Basis of episode	This uses the same hierarchy as the ENCR Basis of Diagnosis recommendations. The highest basis should be used, and this will not necessarily correspond to the diagnostic procedure that was used to identify the date of recurrence, progression, or transformation).
Date of Disease Episode	This is defined as the first date in medical records/pathology where the recurrence, progression or transformation was diagnosed irrespective of the type of diagnostic procedure utilised to diagnose the recurrence, progression, or transformation.
Disease Episode Location*	Disease Episode Location solid tumours only: • **Local**: This is the immediate area surrounding the primary tumour determined by the T-Category of the most recent recommended ENCR staging guidelines. • **Regional.** This is determined by the regional lymph node classification identified as the N-Category of the most recent recommended ENCR staging guidelines. • **Distant** This is determined by the M-category of the most recent recommended ENCR staging guidelines.

Please see Figure 1 and Figure 2 for guidance concerning recurrence, progression, and transformation pathways, how they occur and what to record. The figures below are for guidance only.

Please note that if a cancer registry has to record ‘not known’ for treatment intention or treatment response but does have reliable datasets which contain other Tier 1 or Tier 2 data, we advise these data are still collected.

European Network of Cancer Registries

Figure 1. Solid Tumour Recurrence and Progression Work-Flow Diagram

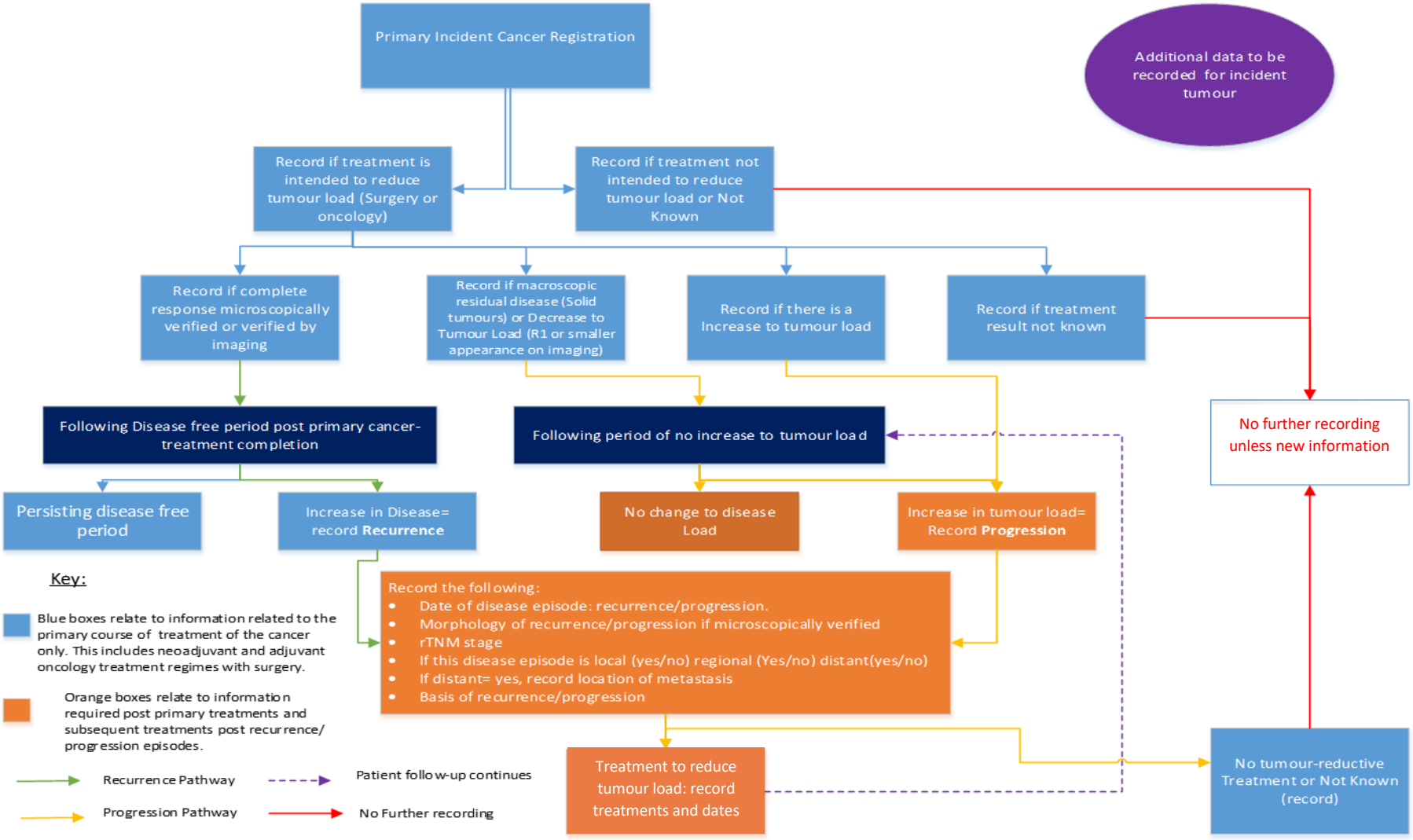
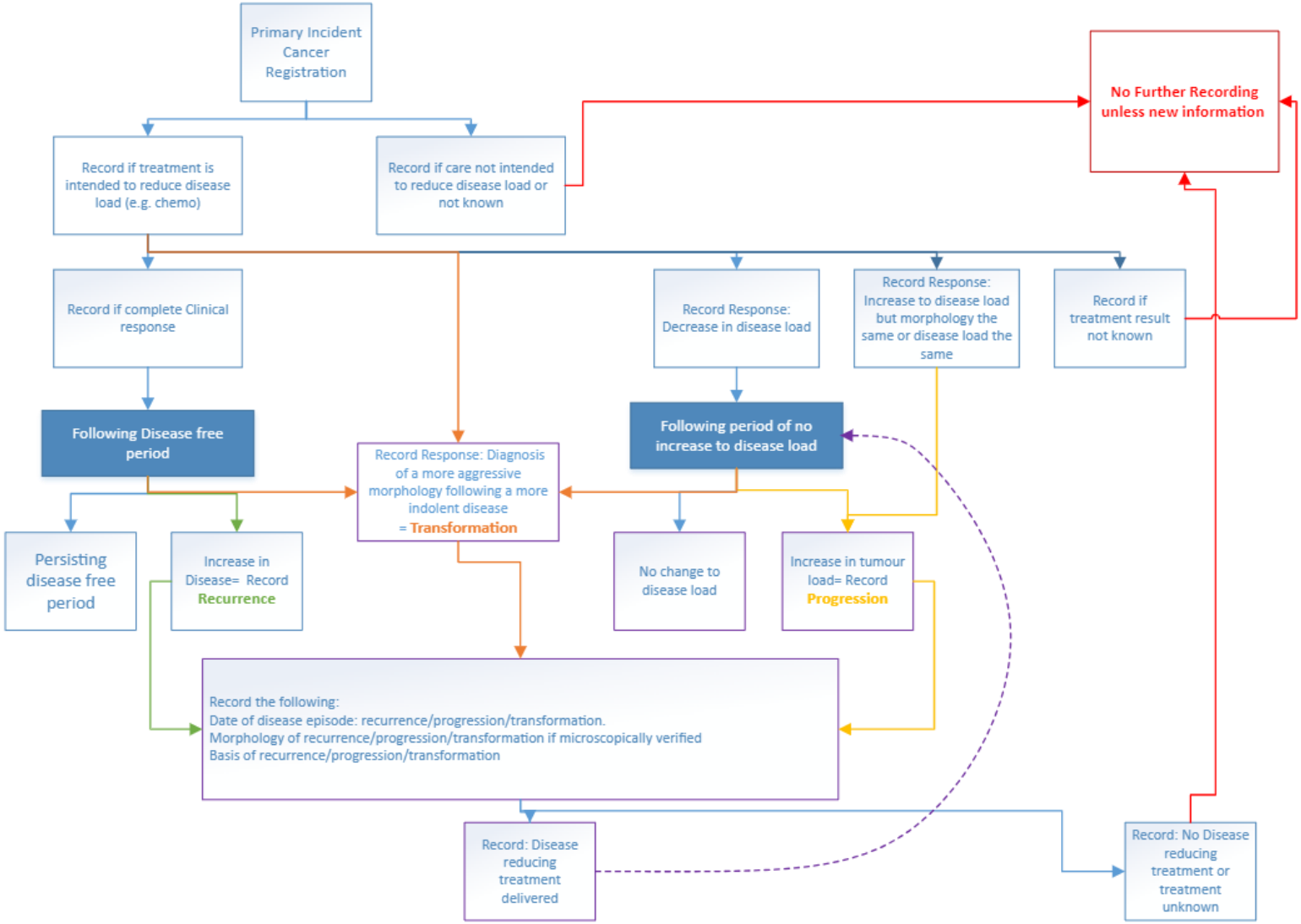


Figure 2. Haematological Malignancies Recurrence, Transformation and Progression Work-Flow



Blue boxes relate to information related to the primary course of treatment of the cancer only.

Purple boxes relate to information required post primary treatments and subsequent treatments post recurrence/progression episodes.

Recurrence Pathway

Progression Pathway

Transformation Pathway

Patient follow-up continues

No Further recording

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