CCO Data Book

Appendix 1.9 – CCO Staging Guidelines

Reporting of Cancer Stage Information by Acute Care Hospitals in Ontario

Forward

This document is an accompanying reference to Ontario's staging policy entitled "*Guidelines for Staging Patients with Cancer*" which was endorsed in November 2005. This summary provides a description of the current processes and procedures for reporting cancer stage information.

I. Introduction

The appropriate management of a patient with cancer is not possible without knowledge of the extent or stage of the cancer[1]. All clinicians should stage all cancer patients as part of routine assessment and documentation of the treatment plan. Each treating facility is responsible for ensuring processes are in place for collection and accurate clinical documentation of stage data.

Stage information constitutes one of the most important prognostic factors for cancer. The availability of high quality stage data also supports providers, administrators, researchers and decision-makers in their planning, evaluation and quality improvement activities in order to continue to enhance the quality of patient care and outcomes.

Stage is defined as the classification of patients with cancer into prognostically similar groups according to the extent of the disease. Stage at diagnosis is the extent of the disease at the time of initial diagnosis.

This document provides guidance regarding the reporting of stage at diagnosis for cancer patients receiving treatment in any Ontario acute care hospital, which includes:

- 14 Regional Cancer Centres (RCC) and their Cancer Surgery Agreement host hospitals (see Appendix A)
- other Cancer Surgery Agreement (CSA) hospitals (see Appendix A) and
- non-Cancer Surgery Agreement (non-CSA) hospitals.

There are currently two processes in Ontario for collecting cancer stage data at diagnosis: Tumour Node Metastases (TNM) Staging and Collaborative Staging (CS). TNM Staging is reported centrally to Cancer Care Ontario (CCO) through CCO's Data Book by the province's 14 RCCs and their host hospitals. The strategy for implementing stage reporting in non-RCCs focused on implementing CS and leveraging new electronic discrete synoptic reporting

tools. Implementation of CS data collection in non-RCC CSA hospitals was completed in 2008/09. Expansion of CS reporting to non-CSA hospitals was completed in 2009/10. CS data collection for breast, lung, prostate and colorectal cancer cases at the RCCs and host hospitals began with the 2010 diagnosis year and has since expanded to include Melanoma Skin, Gynecologic sites (e.g. Corpus Uteri, Cervix Uteri, Ovary, Fallopian Tube, Vagina, Vulva) and Thyroid. CCO is also working to promote the use of stage data and other prognostic factors in the development of cancer system indicators. As part of this effort, CCO is working towards the development of clinically relevant indicators for prognostically similar groups of cancer cases. This grouping would be done using valid and reliable data on cancer stage and other important prognostic factors. These indicators would support specific actions and strategies aimed at improving the understanding and treatment of cancer. More specifically, this involves:

- Identifying, developing, implementing and reporting surveillance indicators for prognostically similar groups of cancer cases.
- Identifying, developing, implementing, and reporting treatment pattern and guideline concordance indicators that use stage and other prognostic factors for specific disease sites.
- Disseminating and sharing stage based indicators in order to promote uptake of stage related information in decision making processes (and also support stage data quality improvement).

II. TNM Staging

Target for Reporting TNM Stage Information

Post 2008/09, the CCO Cancer Surgery Agreement requires a 90% completeness target for reporting of valid and accurate TNM stage at diagnosis for all stageable, analytic cancer cases presenting for treatment at the Regional Cancer Centres (including host hospital cases that may only receive surgical treatment without any adjuvant therapy provided by the cancer centre clinics). This excludes the reporting of TNM for patients with breast, colorectal, lung and prostate cancer diagnosed 2010 forward; patients with Melanoma Skin and Gynecologic cancer from 2011 forward and patients with Thyroid cancer from 2013 forward.

Accountability/Responsibility for Reporting TNM Staging Information

The **Regional Vice President** is responsible for ensuring that TNM stage information is properly documented and reported to CCO through each RCCs CCO Data Book process. CCO will assist RVPs in ensuring that there are effective processes for ensuring the highest level of stage data quality and completeness.

All RCCs should have a documented policy for the identification, collection and processing of cancer stage related data in their organization. The policy should also include clearly identified responsibility and accountability for documenting and assigning stage. It will be the responsibility of each treatment centre to ensure compliance with the policy and that procedures are in place to ensure that the stage information is of high quality.

CCO will assist RCCs with monitoring completeness of stage information through education, expert technical staging support and stage data quality reporting. CCO will present data on stage data quality and completeness at regular meetings with RVPs and/or their delegates and through regular reporting through CCO Regional Program processes.

Health Records in each RCC has a responsibility to monitor, on an on-going basis, the completeness and quality of stage data collected. Specific strategies to support quality monitoring should be implemented. These strategies may include: regular review of incomplete stage cases, chart audits, and validation of stage by Health Record Technicians and/or Clinician experts.

Procedure for Reporting TNM Staging Information

All new patients with a diagnosis of invasive cancer, seen at the cancer centre and/or host hospital, should be staged according to the 7th Edition of AJCC Cancer Staging for TNM. Based on the guidelines from AJCC[2], the following cases ***should be excluded*** from staging as there is no AJCC staging schema for them:

- Central Nervous System
- Myeloma
- Leukemias
- Thymomas
- Primary unknown
- Kaposis Sarcoma
- Islets of Langerhans of Pancreas.
- There are additional histologies within each of the disease sites that cannot be staged. Consult the lists of included histologies in the AJCC manual.

Note: Ann Arbor staging system should be applied for Lymphomas as it has been adopted by AJCC.

CCO's Facility Based TNM Stage Capture Rate calculates the percentage of RCC cases for which a valid stage at diagnosis has been reported. The methodology for this calculation excludes some additional cases. While CCO encourages all facilities to collect stage at diagnosis on as many cases as possible, the following stageable cases are **excluded from the Facility Based Stage Capture Rate**:

- Non-melanoma skin
- Paediatric (i.e., < 18 years of age at diagnosis) and
- Non-analytic cases.

CCO also calculates a Population Based Stage Capture Rate which measures the percent of total new incident cases in a year for which valid stage is reported. The same exclusions apply as the Facility Based Rate (except the non-analytic cases whose exclusion is not relevant at the population level).

The stage of disease at diagnosis is to be recorded for all invasive and in-situ cancers and submitted to CCO through each RCC's CCO Data Book reporting process on a monthly basis.

General rules of the 7th Edition AJCC Cancer Staging Handbook should be applied:

- All cases should use the following time guidelines for evaluating stage at diagnosis: Clinical staging includes any information obtained about the extent of cancer before initiation of definitive treatment (surgery, systemic or radiation therapy, active surveillance, or palliative care) or within 4 months after the date of diagnosis, whichever is shorter, as long as the cancer has not clearly progressed during that time frame. Pathologic staging includes any information obtained about the extent of cancer up through completion of definitive surgery as part of first course treatment or identified within 4 months after the date of diagnosis, whichever is longer, as long as there is no systemic or radiation therapy initiated or the cancer has not clearly progressed during that time frame.

- All cases should be confirmed microscopically for TNM classification (including clinical classification). Rare cases that do not have biopsy or cytology of the tumour can be staged but should be analyzed separately and should not be included in survival analysis.

  - Clinical classification (pretreatment clinical classification – designated **cTNM**) and pathological classification (postsurgical histopathological classification – designated **pTNM**) should be used to describe each tumour site.

- After assigning cT,cN and cM and/or pT, pN and pM categories, these may be grouped into stages. An accurate record of the T, N, M categories and the stage group should be recorded in the medical record for every case.

  - The clinical stage is essential to select and evaluate therapy, while the pathological stage provides the most precise data to estimate prognosis and calculate results.

- If there is doubt concerning the T, N, or M classification to which a particular case should be assigned, then the lower (less advanced) category should be assigned. The same principle applies to the stage grouping.

- In the case of multiple, simultaneous tumours in one organ, the tumour with the highest T category is the one selected for classification and staging.

  - For simultaneous bilateral cancers in paired organs, the tumours are classified separately as independent primary cancers in different organs.

  - In the case of tumours of the thyroid, liver, and ovary, multiplicity is a criterion of T classification.

- For specific rules regarding the use of X or assignment of unknown refer to CCO FAQ document

For final stage grouping clinical and pathological data may be combined when only partial information is available in either the pathological classification or the clinical classification.

Pathologic stage may be submitted on its own (without clinical stage) for a resection case where pathologic T and N categories are determined and the clinical or pathologic metastases is presented in the M category.

There are three exceptions when clinical stage should also be submitted for a case:

- Neoadjuvant therapy given

- pT or pN missing from pathology report or

- No resection was performed.

III. Collaborative Staging

Target for Reporting of CS Stage Information

The 2012/13 Cancer Surgery Agreement requires a 90% completeness target for reporting of valid and accurate CS data elements for all stageable, analytic breast, colorectal, lung and prostate cancer cases.

Accountability/Responsibility for Reporting CS Staging Information:

The **Regional Vice President** is responsible for working with CCO to ensure CS stage collection is maintained in each of the acute care hospital treatment facilities in their Regional Cancer Program and Regional Cancer Centre. CCO will work with and support the RVP and all acute care hospitals in maintaining CS data collection and a CS data quality framework to ensure reporting of stage data is valid, timely and complete.

CCO will work with all hospitals to implement electronically enabled CS data collection methods which will automate collection of CS data elements from the Ontario Cancer Registry and from synoptic pathology reports submitted to CCO via ePath. CCO will be responsible for manually abstracting non-pathology CS data elements from the hospital health record and pathology CS data for hospitals still transitioning to synoptic pathology reporting. CCO will be responsible for developing and implementing a data quality monitoring program to measure the quality and completeness of CS data that is collected. Hospitals will work with CCO to enable access to the cancer patient health record through remote technologies where possible. Hospitals will ensure documentation in hospital health records is complete to enable CS data collection. CCO will assist with monitoring completeness of CS data collection by sharing data on completeness of CS stage rate at periodic meetings with hospitals and their RVP and through implementation of regular reporting.

Given CS data collection will be electronically enabled through electronic capture of pathology related CS data elements, maintenance of discrete synoptic pathology reporting is a prerequisite as per the CSA agreement. This agreement also identifies a 90% completeness target for reporting of pathology resection reports against the College of American Pathologists (CAP) Checklist standard. CCO will assist with monitoring the completeness and quality of discrete synoptic pathology resection reports at synoptic reporting hospitals through monthly reporting to the submitting facility. Ensuring completeness of pathology reports will be responsibility of submitting facilities, supported by CCO through regular reporting for hospitals.

Procedure for Reporting CS Staging Information:

CCO will identify the cancer cases for CS data collection from the Ontario Cancer Registry Information System, based on AJCC guidelines as outlined in the previous section.

Demographic and disease information on newly identified cases for CS data collection will be automatically extracted from OCR on a quarterly basis, into Registry+ software, approximately 8-10 months after date of diagnosis (to ensure all treatment data have been received by OCR). Pathology related CS data elements will also be abstracted from the ePath system, after CS case for staging has been identified.

Hospitals working with CCO to facilitate CS data collection will be responsible for arranging and providing CCO with remote access to the electronic cancer patient hospital health records where available. Where that is not possible, hospitals will scan and upload relevant patient health records to CCO's web portal.

CCO abstractors will access cancer patient hospital health records and abstract all remaining CS data elements for the cases, for those data elements not pre-populated with demographic, disease, and pathology information. All pre-populated data will be verified by the CS abstractors with information in the patient health record.

The CS data collection software will automatically derive T, N and M and group stage for all completed CS abstracts.

CCO will report back chart level CS stage data to hospitals on a regular basis, which will include case and disease information, CS minimum data set with computer derived TNM stage information. Hospital and LHIN aggregate reports will also be available.

CCO will be responsible for implementing a rigorous data quality framework to facilitate monitoring quality, completeness and timeliness of CS stage reporting (i.e., re-abstraction audit and completeness metrics).

CCO will include reporting of CS cases in the above mentioned population based stage capture rate starting with CSQI 2009.

Appendix A - 11/12 Cancer Surgery Agreement Hospitals

#	Hospital Name	LHIN Name	LHIN#	ICP
1	**Windsor Regional Hospital**	**Erie St. Clair**	**1**	**Windsor**
2	Hotel-Dieu Grace Hospital	Erie St. Clair	1	Windsor
3	**London Health Sciences Centre**	**South West**	**2**	**London**
4	Grey Bruce Health Services Corporation	South West	2	London
5	St. Joseph's Health Care, London	South West	2	London
6	Huron Perth Healthcare Alliance	South West	2	London
Hospital Name		**LHIN Name**	**LHIN#**	**ICP**

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#	**Hospital Name**	**LHIN Name**	**LHIN#**	**ICP**
7	**Grand River Hospital**	**Waterloo Wellington**	**3**	**Grand River**
8	Cambridge Memorial	Waterloo Wellington	3	Grand River
9	St. Mary's General Hospital	Waterloo Wellington	3	Grand River
10	**Hamilton Health Sciences Corp**	**Hamilton Niagara Haldimand Brant**	**4**	**Hamilton**
11	Joseph Brant Memorial Hospital	Hamilton Niagara Haldimand Brant	4	Hamilton
12	St. Joseph's Healthcare Hamilton	Hamilton Niagara Haldimand Brant	4	Hamilton
13	William Osler Health Centre	Central West	5	Credit Valley
14	**Trillium Health Partners-CVH**	**Mississauga Halton**	**6**	**Credit Valley**
15	Halton Health Services Corporation	Mississauga Halton	6	Credit Valley
16	Trillium Health Partners-Miss	Mississauga Halton	6	Credit Valley
17	**University Health Network**	**Toronto Central UHN**	**7**	**UHN**
18	Mount Sinai Hospital	Toronto Central UHN	7	UHN
19	St. Joseph's Health Centre	Toronto Central UHN	7	UHN
20	St. Michael's Hospital	Toronto Central UHN	7	UHN
21	Women’s College Hospital	Toronto Central UHN	7	UHN
22	**Sunnybrook Health Sciences Centre**	**Toronto Central Sunnybrook**	**7**	**Sunnybrook**
23	The Toronto East General Hospital	Toronto Central Sunnybrook	7	Sunnybrook
24	**Southlake Regional Health Centre**	**Central**	**8**	**Southlake**

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Dated: September 2014

[1] UICC/International Union Against Cancer. 2008. ICC retrieved from http://www.uicc.org/index.php?Itemid=197&id=14275&option=com_content&task=view on July 29, 2008.

[2] American Joint Committee on Cancer: AJCC Cancer Staging Manual, 7th ed. Edge, S.B., Byrd, D.R., Compton, C.C., Fritz, A.G., Greene FL., Trotti, A. New York, NY: Springer-Verlag, 2010.