LTR Casefinding Audit Results: Why Cases Are Missed?

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Background

- Why is Casefinding Important to Both the LTR and Your Facility?
  - Assures that every cancer case has been reported
  - Way to monitor multiple primaries as well as diagnostic/ treatment patterns/resources
  - Documents completeness of cancer registry catchment area
  - Generate reliable statistical reports (eg. Incidence rates)
- Complete casefinding MUST include BOTH clinically AND pathologically confirmed cases.
- Registry needs to conduct casefinding audit periodically to ensure reporting cases are not missed.

Casefinding Sources

- IP/OP Admission/Discharge Documents
- Pathology/Cytology Pathology Reports
- Surgery Logs/Schedules
- Radiology
- Nuclear Medicine
- Radiation Therapy Logs
- Chemotherapy Outpatient Logs
- Emergency Room Records
- Autopsy Reports
- Pain Clinic Logs

The Casefinding sources above are used to generate a "Disease Index" based on the ICD-10-CM (or ICD-9) SEER Casefinding List and fiscal year requested. SEER Casefinding lists by fiscal year may be found at the following URL: https://seer.cancer.gov/tools/casefinding/.

LTR Casefinding Audit

- Purposes
  - To improve the completeness of case ascertainment for cancer reporting
    - Particularly for clinically diagnosed cases without pathological reports
  - Identify main causes of missing cases
  - Implement effective interventions to improve the completeness of case ascertainment

Casefinding (CF) Audit Process

- Audit planning
  - In 2016, LTR decided to conduct an annual CF audit at central office
  - Regions provided the LTR a list of hospitals that will be audited over a five-year period
    - Audit years: 2016 to 2020 (diagnosis year 2014 to 2018)
    - 2-4 hospitals per region per year
  - Audit timeframe: September 1st to June 29th
    - September of each audit year:
      - Request disease index from selected hospitals using the LTR DI request form
      - Provide hospitals the LTR "Registry CF & DI Preparation" document
    - Any missed cases need to be abstracted and transmitted to the LTR before June 29th each year.

Casefinding Audit Process, cont'd

- Requested electronic DI from selected hospitals
  - Indices are to be generated in accordance with the LTR DI request instructions for cancers diagnosed in a specified year and must include at least 2-3months worth of data
- Conducted data linkage at central office
  - Cases not in the LTR SEER*DMS will be marked as potential missed cases and sent to regions for following-back
- Follow-back
  - Provide reporting facilities a list of potentially missed cases
    - Review medical records to verify if cases were truly missed
- Case abstraction
  - Perform chart abstraction for missed cases.
- % missed cases = Number of missed cases/Proportion of annual case count

Example: Hospital with annual case count of 240, and 2 missed cases identified from 3-month DI.

%missed cases = 2/(240/4)*100 **= 3.3%**

Information Collected from CF Audit

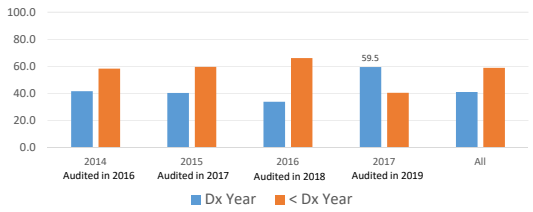
- Names of hospitals selected
- Months of disease indexes screened
- Number of records included in the disease index
- Number of potentially missed cases identified through linkages
- Number of missed cases confirmed
  - For a specified diagnosis year (e.g., Year 2014) AND
  - Before a specified diagnosis year (e.g., <2014)
- Reason(s) for missing cases

CF Audit Results

Audited Hospital Characteristics

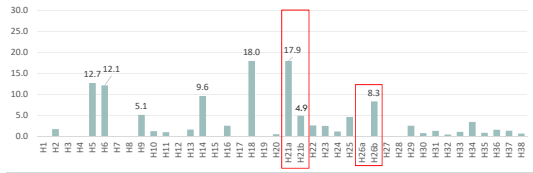
- Total hospitals: 67
  - 14 CoC hospitals
  - Annual case count: <10 (11 hospitals) to >2,000 (3 hospitals)
  - Two field hospitals were audited twice (one with high % missed cases in the first audit, another one with decreasing annual case count).
- Location
  - New Orleans & Southeast LA (Regions 1&3): 10
  - Baton Rouge (region 2): 10
  - Acadiana (Region 4): 14
  - Southwest LA (Region 5): 7
  - Central & North LA (Regions 6-8): 26
- Number of months included in the disease index: 2 months to 12 months

Percentage of Missed Cases by Diagnosis Year



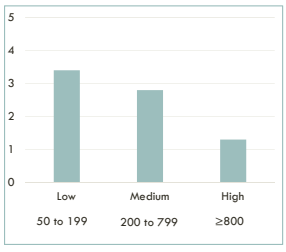
Majority of missed cases were dx'd before a specified diagnosis year, except for 2017 cases.

Percentage of Missed Cases by Hospital for a Specified Dx Year



- List hospitals with annual case count ≥50: 38 hospitals
  - Range of % missed cases: 0% to 18%
  - 7 of them with % missing >5%
  - 12 of them without missed cases
  - H26: Missed 2017 cases were not included in the initial DI request

Percentage of Missed Cases by Hospital Volume for a Specified Dx Year



- 38 hospitals
  - Low volume (annual case count 50-199): 20
  - Medium volume (case count 200-799): 10
  - High volume (case count ≥800): 8
- High volume hospital had lower missing rate (1.3%)

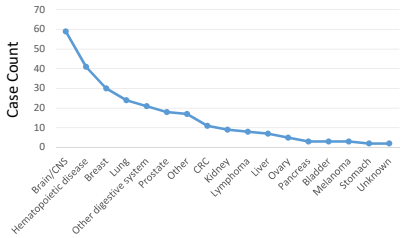
Frequency Distribution by Cancer Site & Audit Year for a Specified Dx Year

Cancer site	Audit Year 2016 Dx'd in 2014		Audit Year 2017 Dx'd in 2015		Audit Year 2018 Dx'd in 2016		Audit Year 2019 Dx'd in 2017		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
Brain/CNS	10	40.0	1	4.8	7	18.9	5	20.0	23	21.3
Breast	2	8.0	4	19.0	0	0.0	2	8.0	8	7.4
Prostate	0	0.0	1	4.8	1	2.7	2	8.0	4	3.7
Lung	2	8.0	6	28.6	6	16.2	4	16.0	18	16.7
Stomach	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
CRC	0	0.0	2	9.5	2	5.4	2	8.0	6	5.6
Liver	1	4.0	0	0.0	4	10.8	1	4.0	6	5.6
Pancreas	0	0.0	0	0.0	0	0.0	1	4.0	1	0.9
Other digestive system	0	0.0	0	0.0	3	8.1	0	0.0	3	2.8
Kidney	2	8.0	1	4.8	1	2.7	0	0.0	4	3.7
Bladder	0	0.0	1	4.8	0	0.0	1	4.0	2	1.9
Ovary	0	0.0	0	0.0	0	0.0	2	8.0	2	1.9
Hematopoietic disease	8	32.0	1	4.8	4	10.8	4	16.0	17	15.7
Lymphoma	0	0.0	2	9.5	1	2.7	0	0.0	3	2.8
Melanoma	0	0.0	1	4.8	0	0.0	0	0.0	1	0.9
Other	0	0.0	1	4.8	6	16.2	1	4.0	8	7.4
Unknown	0	0.0	0	0.0	2	5.4	0	0.0	2	1.9
Total	25	100.0	21	100.0	37	100.0	25	100.0	108	100.0

Frequency Distribution by Cancer Site & Audit Year for All Missed Cases

Cancer site	Audit Year 2016 Dx'd ≤ 2014		Audit Year 2017 Dx'd ≤ 2015		Audit Year 2018 Dx 'd ≤ 2016		Audit Year 2019 Dx'd ≤ 2017		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
Brain/CNS	30	50.0	6	11.5	17	15.6	6	14.3	59	22.4
Breast	4	6.7	9	17.3	12	11.0	5	11.9	30	11.4
Prostate	1	1.7	3	5.8	10	9.2	4	9.5	18	6.8
Lung	4	6.7	8	15.4	8	7.3	4	9.5	24	9.1
Stomach	1	1.7	1	1.9	0	0.0	0	0.0	2	0.8
CRC	1	1.7	3	5.8	4	3.7	3	7.1	11	4.2
Liver	2	3.3	0	0.0	4	3.7	1	2.4	7	2.7
Pancreas	0	0.0	1	1.9	1	0.9	1	2.4	3	1.1
Other digestive system	0	0.0	0	0.0	21	19.3	0	0.0	21	8.0
Kidney	2	3.3	2	3.8	4	3.7	1	2.4	9	3.4
Bladder	0	0.0	2	3.8	0	0.0	1	2.4	3	1.1
Ovary	0	0.0	1	1.9	0	0.0	4	9.5	5	1.9
Hematopoietic disease	15	25.0	6	11.5	12	11.0	8	19.0	41	15.6
Lymphoma	0	0.0	5	9.6	3	2.8	0	0.0	8	3.0
Melanoma	0	0.0	3	5.8	0	0.0	0	0.0	3	1.1
Other	0	0.0	2	3.8	11	10.1	4	9.5	17	6.5
Unknown	0	0.0	0	0.0	2	1.8	0	0.0	2	0.8
Total	60	100.0	52	100.0	109	100.0	42	100.0	263	100.0

Case Count by Cancer Site for All Missed Cases



- Total missed cases: 263
- Top three cancer sites cover about 50% of missed cases
  - Brain/CNS: 59 (22.4%)
  - Hematopoietic: 41 (15.6%)
  - Breast: 30 (11.4%)

Summary

- Total of 67 facilities were audited between 2016 and 2019
- 263 missed cases were identified:
  - 59% of cases were missed before the targeted diagnosis year
- High volume hospitals were less likely to miss reportable cases than low volume facilities
  - For high volume hospitals, even small % of missed cases could impact the overall LTR completeness.
    - For instance: A hospital with annual case count 2000, 2% missed will yield 40 cases under report.
- Majority of missed cases were brain/CNS (22.4%) and hematopoietic disease (15.6%).

Major Reasons for Missing Cases

- **Clinical diagnosis only**
  - Diagnosed solely by scan/image (radiology report):
    - Brain, liver, pancreas, lung, etc
  - Based on lab results (blood, BM) and symptom:
    - Hematopoietic diseases
- Consultation or diagnosed prior to reference year
- Pathology reports not in DMS: field hospitals
- Not on the routine requested DI list: field hospitals
  - Follow-back with reporting facility IT/HIM department to verify the issue
- Diagnosed in other states
  - All reportable LA cases are required to be abstracted and transmitted to LTR regragless the class of case
- Unknown (Human error)

Prevent Missed Cases in the Future

- It is important to include the out-patient and radiology logs in casefinding list.
  - Please include all the casefinding sources suggested by LTR in your CF list
- Make sure all potential reportable cases sitting in your suspense queue are completely investigated and processed in a timely manner including benign/borderline brain tumor and Heme cases
- When requesting the disease index from field hospitals the Casefinding letter, CF & DI flyer, and request form should be included so the facility's IT/HIM department is clear on exactly what is needed

Prevent Missed Cases in the Future, cont'd

- The LTR will:
  - Remind hospital cancer registries via LCRA Newsbreak semiannually that:
    - Complete Casefinding is important to both your facility & the LTR and the clinical/pathological sources that should be included
    - Non-analytic cases should be reported to the LTR
    - Any reportable cases prior to hospital registry's reference year are required to be abstracted and sent to LTR
  - Use E-rad and CDA for casefinding to identify clinical diagnosis only cases timely
  - Continue to use:
    - Hospital Inpatient Discharge Data (HIDD) file to identify missed cases which focuses on brain/CNS tumor, kidney, and pancreatic cancer

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Questions?

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